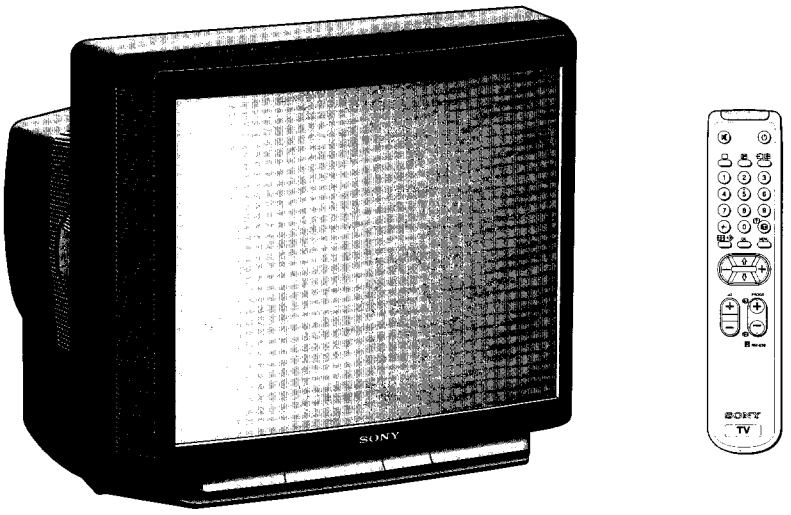
SERVICE MANUAL

BE-3D CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-25X1A	RM-839	Italian	SCC-K05G-A
KV-25X1B	RM-839	French	SCC-K01G-A
KV-25X1D	RM-839	AEP	SCC-K07G-A
KV-25X1E	RM-839	Spanish	SCC-K06G-A
KV-25X1K	RM-839	OIRT	SCC-K08N-A
KV-25X1L	RM-839	Irish	SCC-J21A-A
KV-25X1R	RM-839	OIRT	SCC-K08P-A
KV-25X1U	RM-839	UK	SCC-K04E-A



MICROFILM

TRINITRON® COLOR TV

SONY®

ITEM MODEL	Television System	Channel Coverage	Colour System
Italian	B/G/H	VHF: E2-E12, S1-S20, A-H, H1,H2 UHF: E21-E69	PAL NTSC3.58/4.43 (video input only)
French	B/G/H, D/K, L, I	L SECAM VHF: F2-F10 UHF: F21-F69 TV CABLE TV (1) VHF: B-Q UHF: S21-S44 PAL B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 PAL I UHF: B21-B69 D/K VHF: R01-R20 UHF: B21-B69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, S42-S46	PAL, SECAM NTSC3.58/4.43 (video input only)
AEP	B/G/H, D/K	B/G/H VHF: E2-E12 UHF: S1-S20 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R20 UHF: B21-B69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, S42-S46	PAL, SECAM NTSC3.58/4.43 (video input only)
Spanish	B/G/H, D/K	PAL B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R20 UHF: B21-B69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, S42-S46	PAL, SECAM NTSC3.58/4.43 (video input only)
OIRT	B/G/H, D/K	B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R12 UHF: R21-R69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, S42-S46	PAL, SECAM NTSC3.58/4.43 (video input only)
Irish UK	I	UHF: U21-U69	PAL NTSC3.58/4.43 (video input only)

MODEL	25X1A	25X1B	25X1D	25X1E	25X1K 25X1R	25X1L 25X1U
Power Consumption	74W	86W	86W	86W	86W	134W

SPECIFICATIONS

Picture Tube — Super Trinitron
Approx. 63 cm (25 inches)
(Approx. 59 cm picture measured diagonally)
110° -deflection

Rear/Front Terminals

[REAR]

1 21-pin Euro connector (CENELEC standard)
- Inputs for audio / video signals
- Inputs for RGB
- Outputs for TV audio and video signals

2/S 2, 21-pin Euro connector (CENELEC standard)
- Inputs for audio / video signals
- Inputs for S video
- Outputs for TV audio and video signals (selectable)

[FRONT]

3 , Video input - phono jack
3 , Audio inputs - phono jacks
3 , S video input - 4 pin DIN
Stereo minijack - headphone jack

Sound output
Left/Right — 2x10W (RMS)
2x20W (music power)
Dimensions — 593x502x512 mm approx.
Weight — Approx. 33.0 kg
Supplied accessories — RM-839 Remote Commander (1)
Batteries R6 (2)
Other features — Fastext, TOPTEXT

[RM-839]

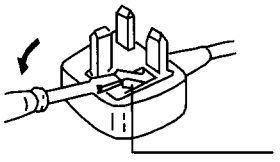
Remote control system	Infrared control
Power requirements	3V dc (2 batteries) R6 (size AA)
Dimensions	Approx. 210x45x24 mm (w/h/d)
Weight	Approx. 90g (Not including battery)

Design and specifications are subject to change without notice.

Item \ Model name	KV-25X1A	KV-25X1B	KV-25X1D	KV-25X1E	KV-25X1K KV-25X1R	KV-25X1L KV-25X1U
PIP	OFF	OFF	OFF	OFF	OFF	OFF
MPIP	OFF	OFF	OFF	OFF	OFF	OFF
Rotation Coil	OFF	OFF	OFF	OFF	OFF	OFF
VM Set	OFF	OFF	OFF	OFF	OFF	OFF
Scart 1	ON	ON	ON	ON	ON	ON
Scart 2	ON	ON	ON	ON	ON	ON
Front in (3)	ON	ON	ON	ON	ON	ON
Scart 4	OFF	OFF	OFF	OFF	OFF	OFF
AKB in 16:9 mode	ON	ON	ON	ON	ON	ON
TXT	ON	ON	ON	ON	ON	ON
FLOF	ON	ON	ON	ON	ON	ON
TOP	ON	ON	ON	ON	ON	ON
Norm B/G/H	ON	ON	ON	ON	ON	OFF
Norm I	OFF	ON	OFF	OFF	OFF	ON
Norm D/K	OFF	ON	ON	ON	ON	OFF
Norm L	OFF	ON	OFF	OFF	OFF	OFF
Language Preset	Italian	French	German	Spanish	OIRT	English

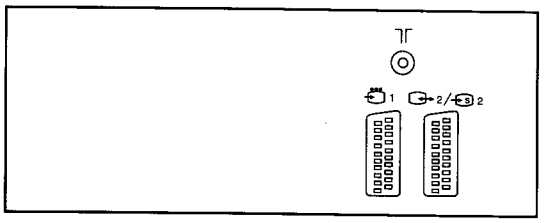
WARNING (KV-25X1L/25X1U only)

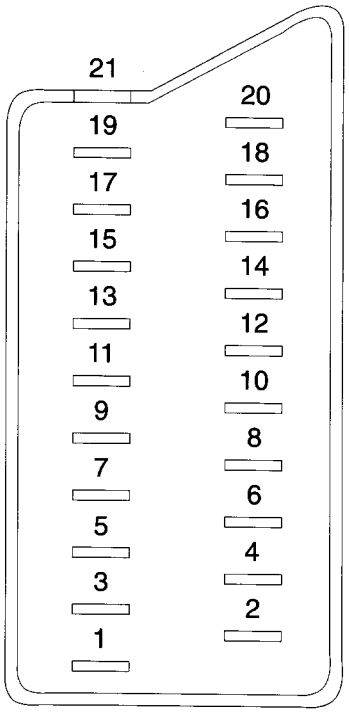
The flexible mains lead is supplied connected to a **B.S. 1363** fused plug having a fuse of **5 AMP** capacity. Should the fuse need to be replaced, use a **5 AMP FUSE** approved by **ASTA** to **BS 1362**, ie one that carries the ASTA mark.
IF THE PLUG SUPPLIED WITH THIS APPLIANCE IS NOT SUITABLE FOR YOUR SOCKET OUTLETS IN YOUR HOME.
IT SHOULD BE CUT OFF AND AN APPROPRIATE PLUG FITTED.
THE PLUG SEVERED FROM THE MAINS LEAD MUST BE DESTROYED AS A PLUG WITH BARED WIRES IS DANGEROUS IF ENGAGED IN A LIVE SOCKET OUTLET.
When an alternative type of plug is used it should be fitted with a **5 AMP FUSE**, otherwise the circuit should be protected by a **5 AMP FUSE** at the distribution board.



How to replace the fuse.
Open the fuse compartment with the screwdriver blade
and replace the fuse.

21 pin connector (1, 2 / S 2)

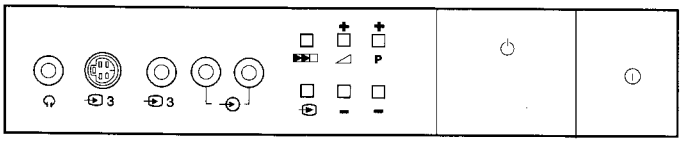




Pin No.	1	2	4	Signal	Signal Level
1	○	○	○	Audio output B (Right)	Standard level : 0.5V rms Output impedance : Less than 1k ohms*
2	○	○	○	Audio input B (Right)	Standard level : 0.5V rms Output impedance : More than 10k ohms*
3	○	○	○	Audio output A (Left)	Standard level : 0.5V rms Output impedance : Less than 1k ohm*
4	○	○	○	Ground (Audio)	
5	○	○	○	Ground (Blue)	
6	○	○	○	Audio input A (Left)	Standard level : 0.5V rms Output impedance : Less than 10k ohm*
7	○	●	●	Blue input	0.7 ± 3dB, 75 ohms, positive
8	○	○	○	Function select (AV control)	High state (9.5 - 12V) : Part mode Low state (0 - 2V) : TV mode Input impedance : More10k ohms Input capacitance : Less than 2nF
9	○	○	○	Ground (Green)	
10	○	○	○	Open	
11	○	●	●	Green	
12	○	○	○	Open	
13	○	○	○	Ground (Red)	
14	○	○	○	Ground (Blanking)	
15	○	—	—	Red input	0.7 ± 3dB, 75 ohms, positive
	—	○	○	(S signal) croma input	0.7 ± 3dB, 75 ohms, positive
16	○	●	●	Blanking input (Ys signal)	High state (1 - 3V) Low state (0 - 0.4V) Input impedance : 75 ohms
17	○	○	○	Ground (Video output)	
18	○	○	○	Ground (Video input)	
19	○	○	○	Video output	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
20	○	—	—	Video input	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
	—	○	○	Video input Y (S signal)	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
21	○	○	○	Common ground (plug, sheild)	

○ Connected ● Not Connected (Open) * at 20Hz - 20kHz

Pin No.	Signal	Signal Level
1	Ground	
2	Ground	
3	Y (S signal) input	1V ± 3dB 75 ohm, positive Sync. 0.3V -3 + 10dB
4	C (S signal) input	0.3V ± 3dB 75ohm, positive Sync.



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CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

ATTENTION

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

ATTENTION !!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE.
LE CHÁSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

SAFETY-RELATED COMPONENT WARNING!!

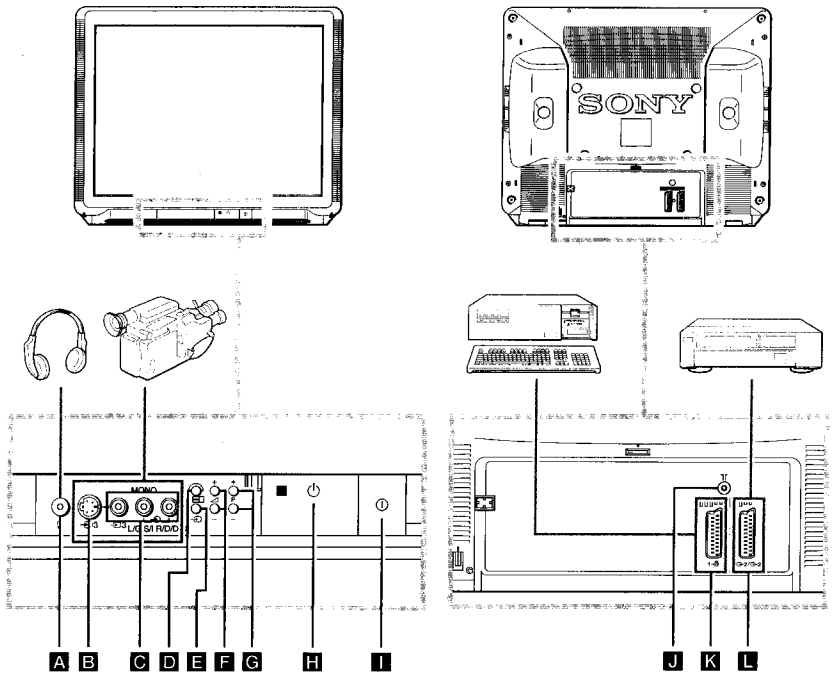
COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND, IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

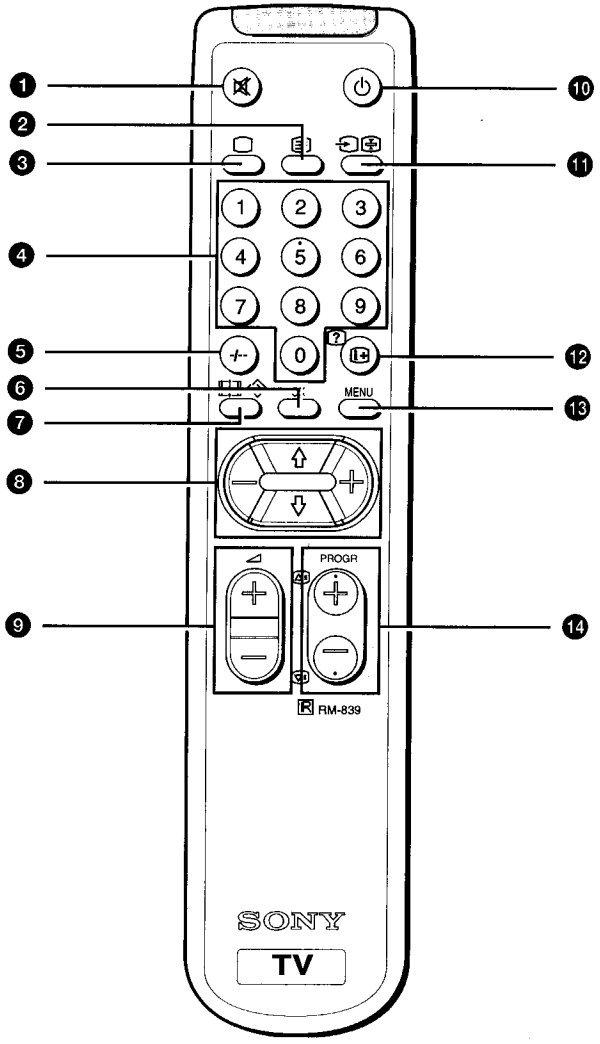
ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÈS PAR UNE TRAME ET PAR UNE MARQUE ⚠ SUR LES VUES EXPLOSÉES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE PUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1 GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.





Overview

This section briefly describes the controls and the buttons on the TV set and on the Remote Commander. Please open the flap at the front of the instruction manual for illustrations of the TV set and the Remote Commander. Letters in boxes refer to the buttons on the TV set, numbers in circles to the buttons on the Remote Commander. For more information, refer to the page numbers given next to each description.

TV buttons and Terminals

Reference and Symbol	Name	Refer to Page
Front of the set		
A ∩	Headphones jack	4
B S 3	S video input jack	29
C 3, 3	Audio/video input jacks	29
D ▶▶	Automatic Preset button	11
E	Input mode button	13
F +/-	Volume control	12
G P +/-	Programme button	12
H ⏻	Standby mode indicator	12
I	Main power switch	12
Rear of the set		
J	Aerial socket	10
K 1	21 pin Euro connector	29
L 2/S 2	21 pin Euro connector	29

Remote Commander Operation

Reference and Symbol	Name	Refer to Page
❶	Muting on/off button	12
❷	Teletext button	13
❸	TV power on/TV mode button	12, 13
❹ 1, 2, ... 9, 0	Number buttons	12
❺ - / --	Double digit entering button	12
❻ OK	OK (Confirmation) button	14
❼ /	Screen format button Teletext: Favourite pages button	12, 28
❽	Menu control	14
❾ +/-	Volume control button	12
❿ ⏻	Standby button	12
⓫ /	Input mode button Teletext: Freezing the subpage	13, 27
⓬ /	On-screen display button Teletext: reveal button	12, 27
⓭ **MENU**	Menu on/off button	14
⓮ **PROGR +/-**	Programme buttons Teletext: Page up/page down buttons	12, 13

Step 1

Connecting the Aerial

(If you connect a VCR, skip to step 2)

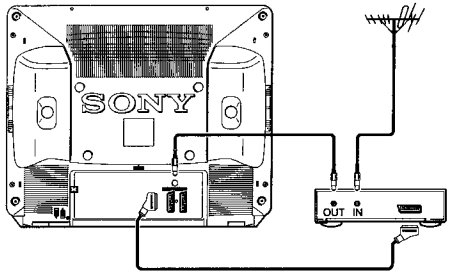
Insert the aerial plug tightly into the aerial socket ⅂⌜ J. Use a good-quality aerial cable (not supplied), corresponding to the relevant regulations.

Step 2

Connecting a VCR

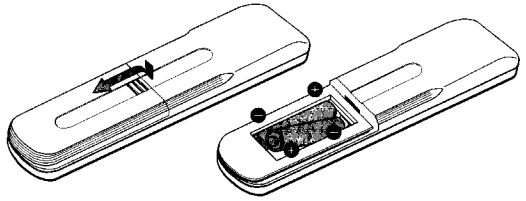
We recommend that you tune in the VCR signal to programme number "0". For details, see "Presetting Channels Manually" on page 16.

See "Connecting Optional Equipment" on page 29 for more information.



Step 3

Inserting the Batteries Into the Remote Commander



Respect your environment! Dispose of used batteries in an environmentally friendly way.

Step 4

Presetting Channels Automatically

With this function, the TV can automatically search and store up to 100 different channel numbers.

If you prefer manual presetting, refer to "Presetting Channels Manually" on page 16.

1 Plug into mains.
Press the power switch ⏻ I on the TV set.

2 Press and hold the button ▸▸□ D on the TV set until the automatic menu is displayed and the search starts.

After all available channels are stored, the normal TV picture is shown.

Note: Channels are automatically stored as follows;

KV-25X1U/29X1U	KV-25X1L/29X1L
Programme 1 BBC1	Programme 1 RTE1
Programme 2 BBC2	Programme 2 RTE2
Programme 3 ITV	Programme 3 BBC1
Programme 4 CH4 or S4C	Programme 4 BBC2
	Programme 5 ITV
	Programme 6 CH4 or S4C

TV Operation

This section explains functions used whilst watching TV. Most operations are carried out using the remote commander (numbers in circles). All basic functions are also available on the TV set (letters in boxes). Open the flap at the front of the Instruction Manual to see the illustrations of the Remote Commander and the TV set.

TV Operation

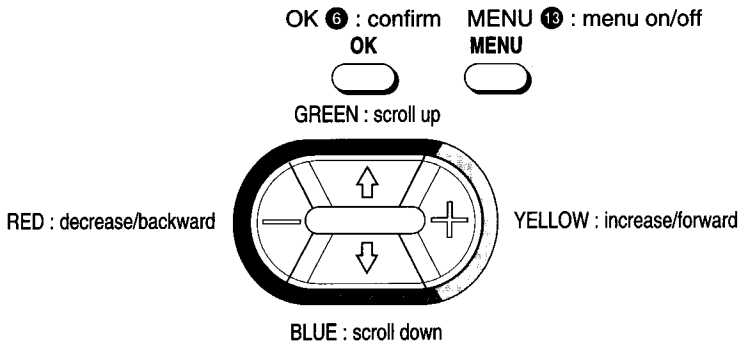
To	Press
Switch on	⏻ I on TV
Switch off temporarily	⏻ ⑩ TV is now in standby mode and ⏻ H indicator on TV lights up.
Switch on from standby mode	▭ ③, PROGR +/- ⑭ G or any number button ④.
Switch off completely	⏻ I on TV To save energy, switch off your TV completely when TV is not in use.
Select programmes	PROGR +/- ⑭ G or number buttons ④ For double digit number, press -/- - ⑤ then the number e.g. For 23, press -/- - ⑤ then 2 and 3.
Display on screen indications	ⓘ ⑫. Press again to make the indications disappear.
Adjust the volume	◿ + or - ⑨ F
Mute the sound	🔇 ①. Press again to restore the sound.
View programmes in 16:9 mode	▦ ⑦. Press again to return to 4:3 mode.

TV Operation (continued)

To	Press
View video input picture (see page 30 for detailed information)	⏎ ⑪ E repeatedly until the desired video input appears. Press ▭ ③ to restore the TV picture.
View teletext (see page 27 for detailed information)	
Switch on	☰ ②
Select a page	three number buttons ④ or ☰▲ ⑭ (for next page) or ☰▼ ⑭ (for previous page).
Use fastext	Blue, Green, Red or Yellow ⑧.
Switch off	▭ ③

Adjusting and Setting the TV Using the Menu

You can adjust and set various functions on the TV using the following remote commander buttons:



Choosing the Menu Language

This function enables you to change the language of the menu screens.

1 Press power switch ⏻ on the TV. If the standby indicator ⏻ on the TV is lit, press ▭ ❸ or a number button ❹ on the Remote Commander.

2 Press the MENU button ⓭ on the remote commander.

3 Press blue or green ❽ to select the language you want then press yellow ❽.

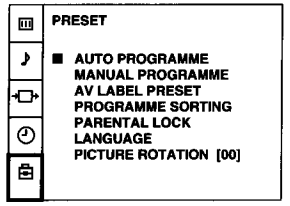
4 Press the MENU button ⓭ to restore the normal TV picture.

Presetting Channels Automatically

You may have already preset the channels automatically by using the method shown on page 11. You can also preset channels automatically by using the remote commander as follows:

1 Press the MENU button ⓭.

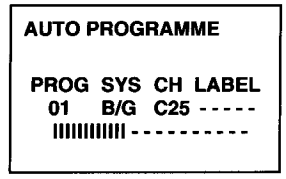
2 Press blue or green ❽ to select the symbol 🧰 on the menu screen then press yellow ❽.



3 Press blue or green ❽ to select 'AUTO PROGRAMME'.

4 Press and hold yellow ❽ until the automatic menu is displayed and the search starts.

After all available channels have been preset, the normal TV picture is shown.

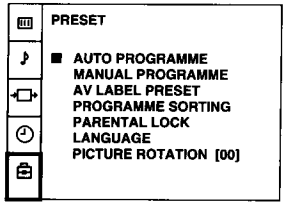


Presetting Channels Manually

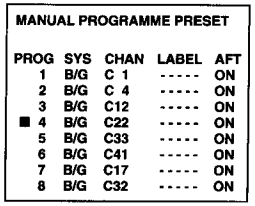
This function enables you to preset channels one by one to different programme numbers. This is also convenient for allocating programme numbers to various video input sources.

1 Press the MENU button ⓭.

2 Press blue or green ❽ to select the symbol 🧰 on the menu screen then press yellow ❽.



3 Press blue or green ❽ to select 'MANUAL PROGRAMME' then press yellow ❽.


MANUAL PROGRAMME PRESET
PROG SYS CHAN LABEL AFT
1 B/G C 1 ----- ON
2 B/G C 4 ----- ON
3 B/G C12 ----- ON
4 B/G C22 ----- ON
5 B/G C33 ----- ON
6 B/G C41 ----- ON
7 B/G C17 ----- ON
8 B/G C32 ----- ON

4 Press blue or green ❽ to select on which programme number you want to preset a channel then press yellow ❽.

5 Press blue or green ❽ to select the TV broadcast system 'I' or a video input source (AV1,AV2 ...) then press yellow ❽.

6 **(This step 6 is only for KV-25X1L/29X1L)**
Press blue or green ❽ to select 'C' (for terrestrial channels) or 'S' (for cable channels) then press yellow ❽.

7 Select the first number digit of 'CHAN' then the second number digit of 'CHAN' with the number buttons ❹ on the remote commander
or
Press blue or green ❽ to search for the next available channel number.

8 If you want to store the channel number, go to step 9. If not, select a new channel number using the number buttons ❹ on the remote commander or press blue or green ❽ to resume the search.

9 Press OK ❻.

10 Repeat steps 4 to 9 to preset other channels.

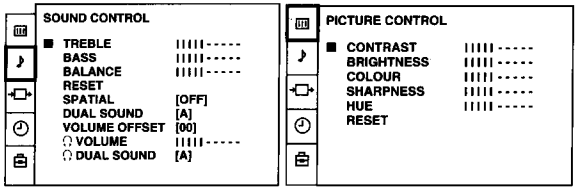
11 Press the MENU button ⓭ to restore the normal TV picture.

Adjusting the Picture and Sound

Although the picture and sound are adjusted at the factory, you can adjust them to suit your own taste.

1 Press the MENU button ⓭.

2 Press blue or green ❽ to select 🖼 for picture control or ♪ for sound control then press yellow ❽.



3 Press blue or green ❽ to select the desired item then press yellow ❽.

4 Press red or yellow ❽ to alter the item then press OK ❻.
For the effect of each control, see the following tables.

5 Repeat steps 3 and 4 to adjust the other items.

6 Press the MENU button ⓭ to restore the normal TV picture.

PICTURE CONTROL	Effect
Contrast	Lower —— I —— Higher
Brightness	Darker —— I —— Brighter
Colour	Less —— I —— More
Sharpness	Softer —— I —— Sharper
Hue	Greenish —— I —— Reddish (NTSC signals only)
Reset	Resets picture to the factory preset levels.

SOUND CONTROL	Effect
Treble	Less —— I —— More
Bass	Less —— I —— More
Balance	Left —— I —— Right
Reset	Resets sound to the factory preset levels.
Spatial	Acoustic sound effect.
Dual Sound	A: Left channel —> B: Right channel —> stereo —> mono
Volume Offset	Presets the volume level for individual programmes. -12 —— 0 —— +12
∩ Volume	Adjusts the headphone volume.
∩ Dual Sound	Presets the headphone channels. A: Left channel —> B: Right channel —> stereo —> mono

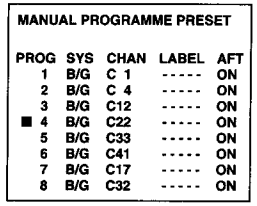
Manual Fine-Tuning

Normally, the automatic fine-tuning (AFT) function is operating.
If the picture is distorted however, you can manually fine-tune the TV to obtain a better picture reception.

1 Press the MENU button ⓭.

2 Press blue or green ❽ to select the symbol 🧰 on the menu screen then press yellow ❽.

3 Press blue or green ❽ to select 'MANUAL PROGRAMME' then press yellow ❽.


MANUAL PROGRAMME PRESET
PROG SYS CHAN LABEL AFT
1 B/G C 1 ----- ON
2 B/G C 4 ----- ON
3 B/G C12 ----- ON
■ 4 B/G C22 ----- ON
5 B/G C33 ----- ON
6 B/G C41 ----- ON
7 B/G C17 ----- ON
8 B/G C32 ----- ON

4 Press blue or green ❽ to select the programme number which corresponds to the channel you want to manually fine-tune.

5 Press yellow ❽ repeatedly until the AFT position changes colour..

6 Press blue or green ❽ to change the frequency of the channel from -15 to +15.

7 Press OK ❻.

8 Repeat steps 4 to 7 to fine-tune other channels.

9 Press the MENU button ⓭ to restore the normal TV picture.

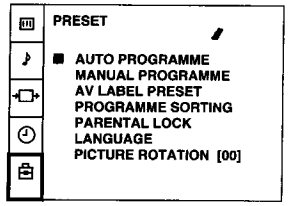
Sorting Programme Positions

This function enables you to move channels to different programme numbers.

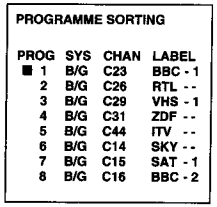
1 Press the MENU button ⓭.

2 Press blue or green ❽ to select the symbol 🧰 on the menu screen then press yellow ❽.

3 Press blue or green ❽ to select 'PROGRAMME SORTING' then press yellow ❽.



4 Press blue or green ❽ to select the channel you want to move to another programme number then press yellow ❽.


PROGRAMME SORTING
PROG SYS CHAN LABEL
■ 1 B/G C23 BBC - 1
2 B/G C26 RTL - -
3 B/G C29 VHS - 1
4 B/G C31 ZDF - -
5 B/G C44 ITV - -
6 B/G C14 SKY - -
7 B/G C15 SAT - 1
8 B/G C16 BBC - 2

5 Press blue or green ❽ to select the programme number to which you want to move the channel selected in step 4 then press yellow ❽.

6 Repeat steps 4 to 5 if you wish to move other channels to different programme numbers.

7 Press the MENU button ⓭ to restore the normal TV picture.

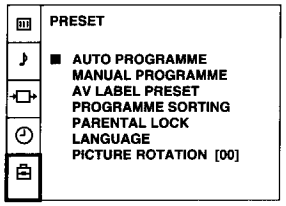
Using Parental Lock

This function enables you to prevent undesirable broadcasts from appearing on the screen. We suggest you use this function to prevent children from watching programmes which you consider unsuitable.

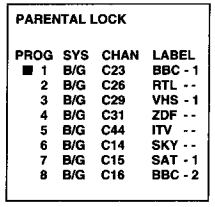
1 Press the MENU button ⓭.

2 Press blue or green ❽ to select the symbol on the menu screen then press yellow ❽.

3 Press blue or green ❽ to select 'PARENTAL LOCK' then press yellow ❽.



4 Press blue or green ❽ to select the channel you want to block then press yellow ❽. The symbol appears before the programme number to indicate that this channel is now blocked.


PARENTAL LOCK
PROG SYS CHAN LABEL
1 B/G C23 BBC - 1
2 B/G C26 RTL - -
3 B/G C29 VHS - 1
4 B/G C31 ZDF - -
5 B/G C44 ITV - -
6 B/G C14 SKY - -
7 B/G C15 SAT - 1
8 B/G C16 BBC - 2

5 Repeat step 4 if you wish to block other channels.

6 Press the MENU button ⓭ to restore the normal TV picture.

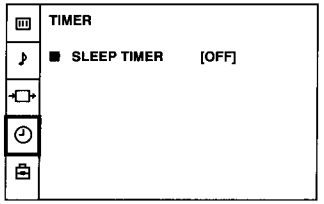
Note: To unblock, press yellow ❽ after selecting the channel to unblock in the 'PARENTAL LOCK' menu.

Using the Sleep Timer

This function enables you to select a time period after which the TV automatically switches into standby mode.

1 Press the MENU button ⓭.

2 Press blue or green ❽ to select the symbol on the menu screen then press yellow ❽.



3 Press yellow ❽.

4 Press red or yellow ❽ to set time delay and press OK ❻.

OFF 0:30 1:00 1:30 ..... 3:30 4:00

One minute before the TV switches into standby mode, a message is displayed on the screen.

5 Press the MENU button ⓭ to restore the normal TV picture.

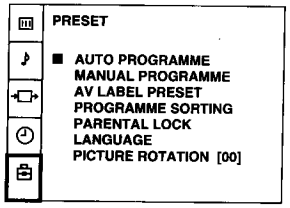
Skipping Programme Positions

This function enables you to skip unused channels when selecting programme numbers with the PROGR+/- buttons. However, you can still watch the skipped channel(s) by using the number buttons.

1 Press the MENU button ⓭.

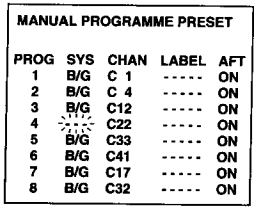
2 Press blue or green ❽ to select the symbol on the menu screen then press yellow ❽.

3 Press blue or green ❽ to select 'MANUAL PROGRAMME' then press yellow ❽.



4 Press blue or green ❽ to select the channel you want to skip then press yellow ❽.

5 Press blue or green ❽ until '- - -' appears in the 'SYS' position.


MANUAL PROGRAMME PRESET
PROG SYS CHAN LABEL AFT
1 B/G C 1 ----- ON
2 B/G C 4 ----- ON
3 B/G C12 ----- ON
4 - - - C22 ----- ON
5 B/G C33 ----- ON
6 B/G C41 ----- ON
7 B/G C17 ----- ON
8 B/G C32 ----- ON

6 Press OK ❻.

7 Repeat steps 4 to 6 to skip other channels.

8 Press the MENU button ⓭ to restore the normal TV picture.

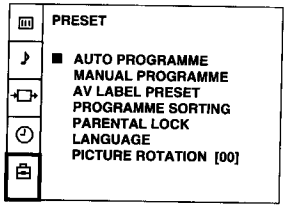
Captioning a Station Name

Names for channels are usually automatically taken from teletext if available. You can however name a channel or an input video source using up to five characters (letters or numbers).

1 Press the MENU button ⓭.

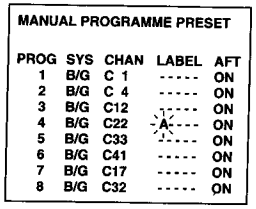
2 Press blue or green ❽ to select the symbol on the menu screen then press yellow ❽.

3 Press blue or green ❽ to select 'MANUAL PROGRAMME' then press yellow ❽.



4 Press blue or green ❽ to select the channel you wish to caption then press yellow ❽ repeatedly until the first element of the 'LABEL' position is highlighted.

5 Press ❽ blue or green to select a letter or number and press yellow ❽ (select '-' for a blank). Select other characters in the same way.


MANUAL PROGRAMME PRESET
PROG SYS CHAN LABEL AFT
1 B/G C 1 ----- ON
2 B/G C 4 ----- ON
3 B/G C12 ----- ON
4 B/G C22 A---- ON
5 B/G C33 ----- ON
6 B/G C41 ----- ON
7 B/G C17 ----- ON
8 B/G C32 ----- ON

6 After selecting all the characters, press OK ❻.

7 Repeat steps 4 to 6 to caption names for other channels.

8 Press the MENU button ⓭ to restore the normal TV screen.

Most TV channels broadcast information via teletext. The index page of the broadcaster (usually page 100) gives you information on how to use the service.
Make sure you use a TV channel with a strong signal, otherwise teletext errors may occur.

Switching Teletext On and Off

1 Select the channel which carries the teletext service you wish to view.

2 Press ❷ to display teletext.
If no teletext signal is broadcast, the indication P100 is displayed on a black screen.

3 Input three digits for the page number using the number buttons ❹.
The page counter searches for the page and after some seconds the page is displayed.

4 Press ❸ to return to the normal TV picture.

Using Other Teletext Functions

To	Press
Access the next or preceding teletext page	⓮ for the next page or ⓮ for the preceding page
Mix the mode	❷ when in teletext mode. Now the teletext page is superimposed on the TV programme. Press again to return to the normal teletext display.
Freeze a teletext subpage	⓫. Press once again to cancel.
Reveal hidden information (eg: answers to a quiz)	⓬. Press once again to cancel.

Favourite page system

You can store up to four of your favourite teletext pages per Teletext service. In this way you have quick access to the pages you frequently use.

Storing pages

1 Use the number buttons ❹ to select the page you would like to store.

2 Press ❼ twice.
The colour prompts at the bottom of the screen flash.

3 Press red, green, blue or yellow to store the selected page.
The page is now stored on this colour.

Repeat steps 1 to 3 for the other 3 pages.

Displaying the Favourite Pages

1 Press ❼.

2 Press blue, green, red or yellow to select the desired page.

Make sure you press ❼, otherwise the normal Fastext facility operates.

Using Fastext

(only available, if the TV station broadcasts Fastext signals)

With Fastext you can access pages with one key stroke . When Fastext is broadcast, a colour-coded menu appears at the bottom of the screen. The colours of this menu correspond to the red, green, yellow and blue colours on the Remote Commander.

Press the Remote Commander colour button that corresponds to the colour-coded menu. The selected page is displayed after some seconds.

Connecting Optional Equipment

There is a wide range of optional equipment you can connect to your TV. Refer to the illustrations on the front flap page of this manual.

Symbol	Acceptable input signals	Available output signals
3, 3 B 3 C	Normal audio/video and S video	No output
1 K	Normal audio/video and RGB	Audio/video from TV tuner
2/ 2 L	Normal audio/video and S video	Audio/video from selected source

About S video input

Video signals may be separated into Y (luminance) and C (chrominance) signals. Separating the two signals prevents interference and thus improves the picture quality.

Notes on connections:

If the picture or sound is distorted, move the VCR away from the TV.

When connecting a monaural VCR, connect only the white jack to both the TV and VCR.

Selecting Input and Output Signals

This section explains how to select the output signal from 2/ 2 L and how to select and view the input. You can use direct access buttons 11 E to select the input or the menu system to select input and output.

Selecting With Direct Access Buttons

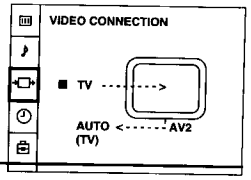
Press 11 E repeatedly.
Press 3 to restore the normal TV picture.

Symbol on the screen	Input Signal
1	Audio/video through Euro AV connector K
	RGB through Euro AV connector K
2	Audio/video through Euro AV connector L
2	S video through Euro AV connector L
3	Audio/video through the phono jacks C
3	S video through the phono jacks B

Selecting With the Video Connection Menu

1 Press the MENU button 13.

2 Press blue or green 8 to select for "VIDEO CONNECTION" then press yellow 8.



3 Press blue or green to select input or output then press yellow 8.

4 Press blue or green repeatedly to select the desired input or output source then press OK 6.

5 Press the MENU button 13 to restore the normal TV picture.

Note: If you select 'AUTO' for output, the output source automatically becomes the same as the desired input source.

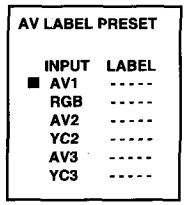
Using AV Label Preset

This function enables you to label the input sources using up to five characters (letters or numbers).

1 Press the MENU button ⓭.

2 Press blue or green ❽ to select the symbol on the screen then press yellow ❽.

3 Press blue or green ❽ to select 'AV LABEL PRESET' then press yellow ❽.



4 Press blue or green ❽ to select the desired input source then press yellow ❽.

5 Press blue or green ❽ to select a letter or number then press yellow ❽ (select '-' for a blank).
Select other characters in the same way.

6 After selecting all the characters, press OK ❻.

7 Repeat steps 4 to 6 to label other input sources.

8 Press the MENU button ⓭ to restore the normal TV screen.

Troubleshooting

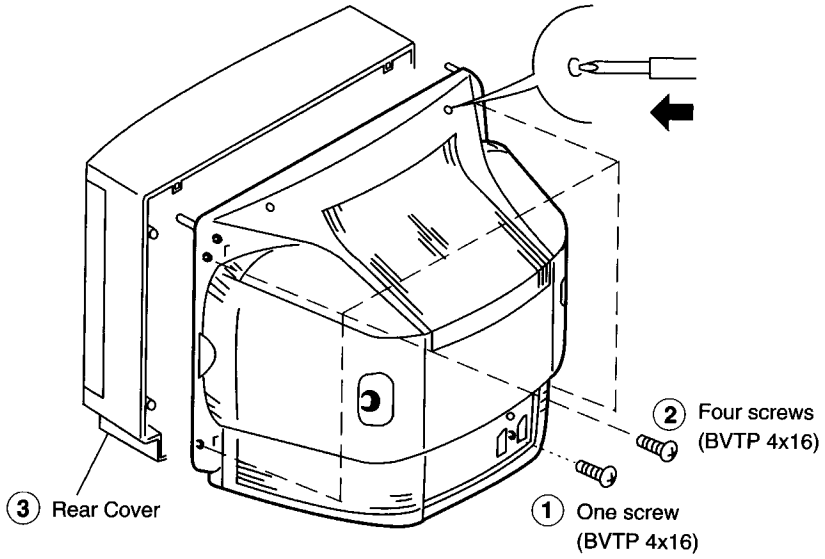
Here are some simple solutions to the problems which affect the picture and sound.

Problem	Solution
No picture (screen is dark), no sound	• Plug the TV in. • Press ⏻ I on the TV. (If ⏻ indicator H is on, press ▭ 3 or a programme number 4 on the Remote Commander.) • Check the aerial connection. • Check if the selected video source is on. • Turn the TV off for 3 or 4 seconds then turn it on again using ⏻ I.
Poor or no picture (screen is dark), but good sound	• Press MENU ⓭ to enter the 'PICTURE CONTROL' menu and adjust 'Contrast', 'Brightness' and 'Colour'.
Poor picture quality when watching an RGB video source.	• Press ⏎ ⓫ E repeatedly to select .
Good picture but no sound	• Press + 9 F. • If is displayed on the screen, press 1.
No colour for colour programmes	• Press MENU ⓭ to enter the 'PICTURE CONTROL' menu, select 'Reset' then press OK ❻.
Remote Commander does not function.	• Replace the batteries.

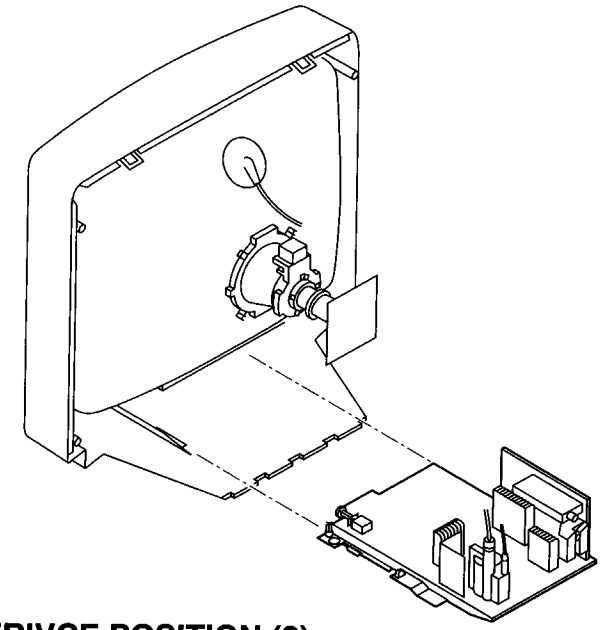
If you continue to have problems, have your TV serviced by qualified personnel. Never open the casing yourself.

SECTION 2
DISASSEMBLY

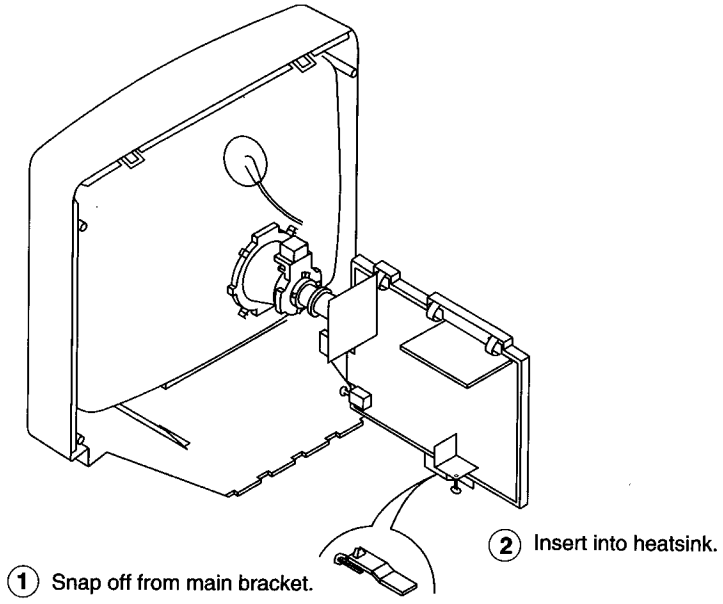
2-1. REAR COVER REMOVAL



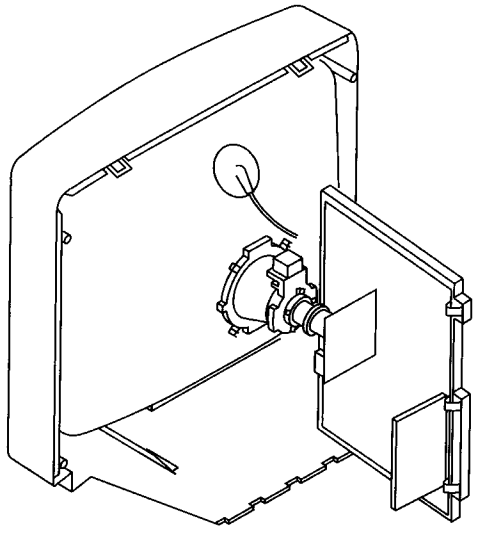
2-2. CHASSIS ASSY REMOVAL



2-3-1. SERVICE POSITION (1)

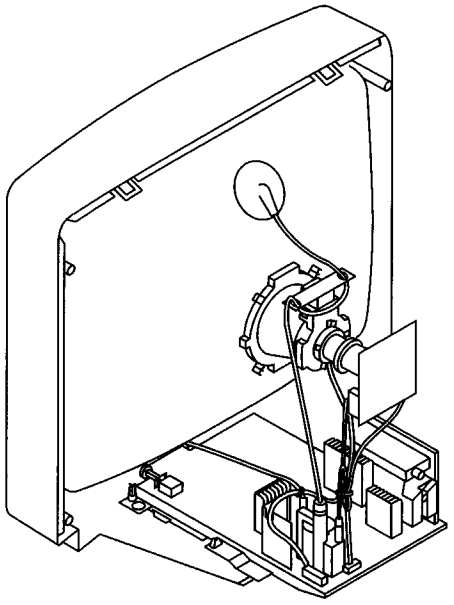


2-3-2. SERIVCE POSITION (2)

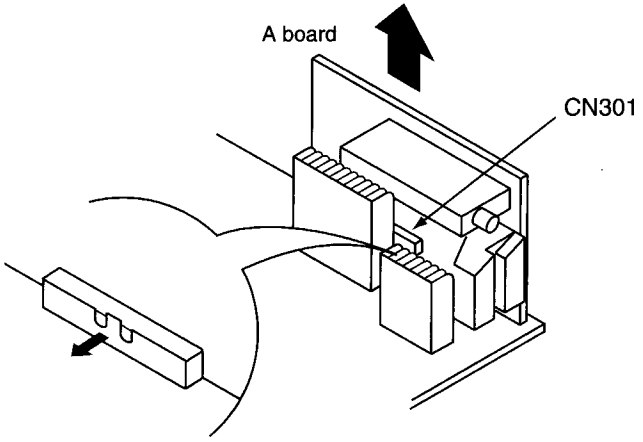


Clip bracket into Beznet.

2-4. WIRE DRESSING

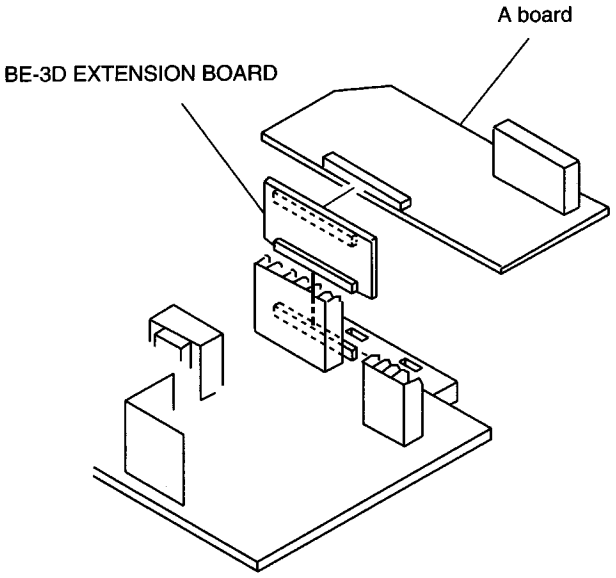


2-5. A BOARD REMOVAL

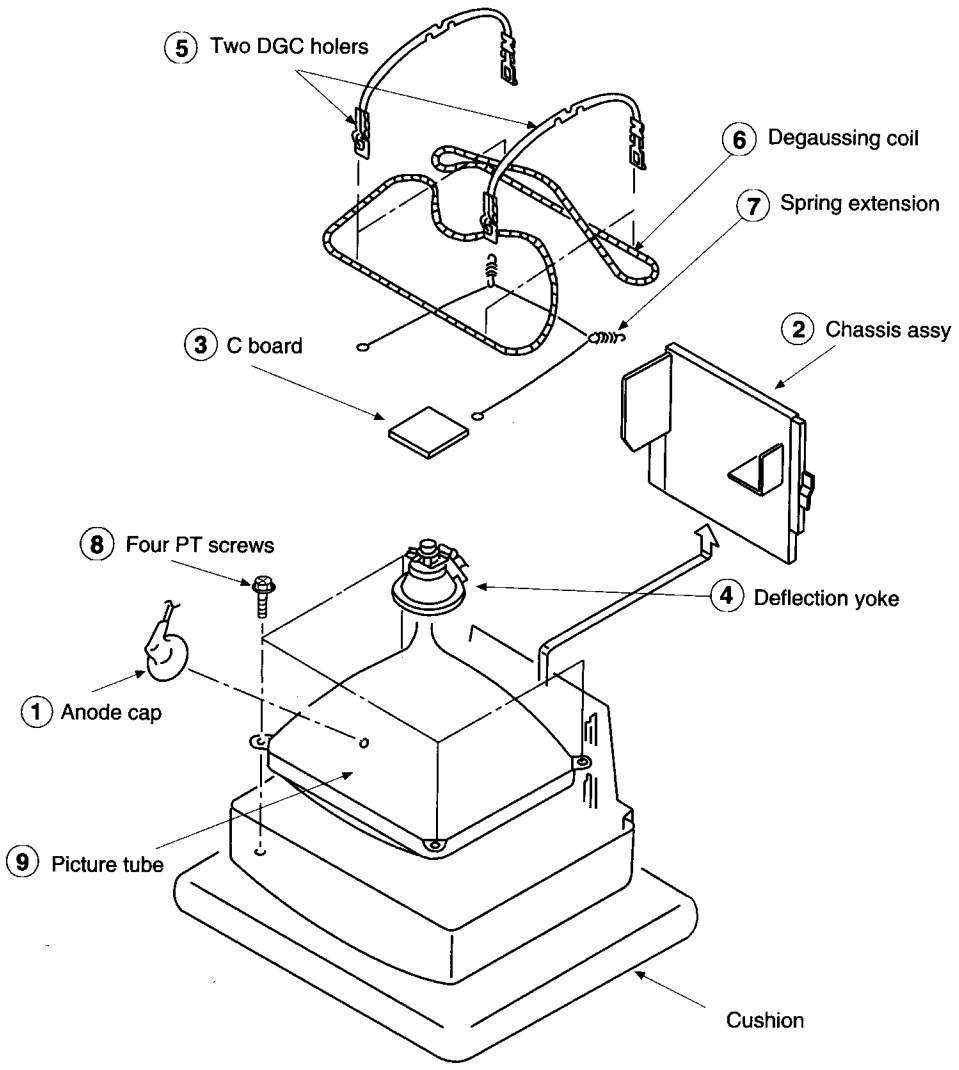


(1) Remove CN301 before removing A board.

2-6. EXTENSION BOARD



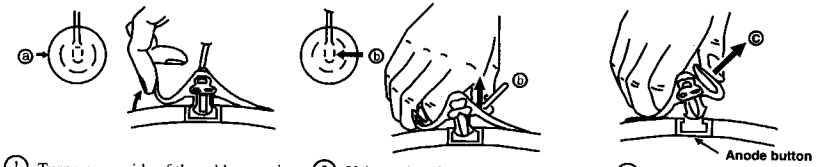
2-7. PICTURE TUBE REMOVAL



• REMOVAL OF ANODE-CAP

Note: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

* **REMOVING PROCEDURES.**



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ

② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ

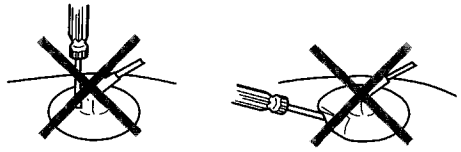
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow ⓒ

• HOW TO HANDLE AN ANODE-CAP

① Don't damage the surface of anode-cap with sharp shaped material !

② Don't press the rubber hardly not to hurt inside of anode-caps !
A metal fitting called as shatter-hook terminal is built into the rubber.

③ Don't turn the foot of rubber over hardly !
The shatter-hook terminal will stick out or damage the rubber.



REMOVAL AND REPLACEMENT OF THE MAIN-BRACKET BOTTOM PLATES.

(1) REMOVING THE PLATES

In the event of servicing being required to the solder side of the D Board printed circuit, the bottom plates fitted to the main chassis bracket require to be removed. This is performed by cutting the gates with a sharp wire cutter at the locations shown and indicated by arrows.

Note : There are 5 plates fitted to the main bracket and secured by 4 or 6 gates. Only remove the necessary plate to gain access to the circuit board.

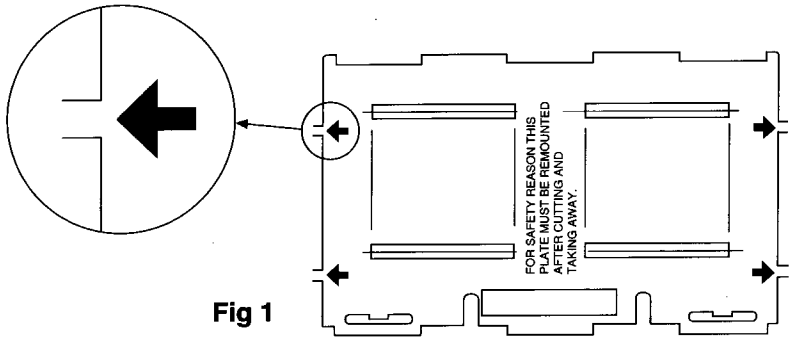


Fig 1

(2) REFITTING THE PLATES

Because the plates differ in size it is important that the correct plates are refitted in their original location.
The plates are identified by markings A-B-C-D-E on their top side.

1. Identify the plate by locating its marking.
2. Turn the plate over noting where the marking is located.
3. Locate the corresponding marking indicated on the main chassis bracket. See Fig 2.
4. Refit the plate as indicated in Fig 3 with the markings located next to each other.

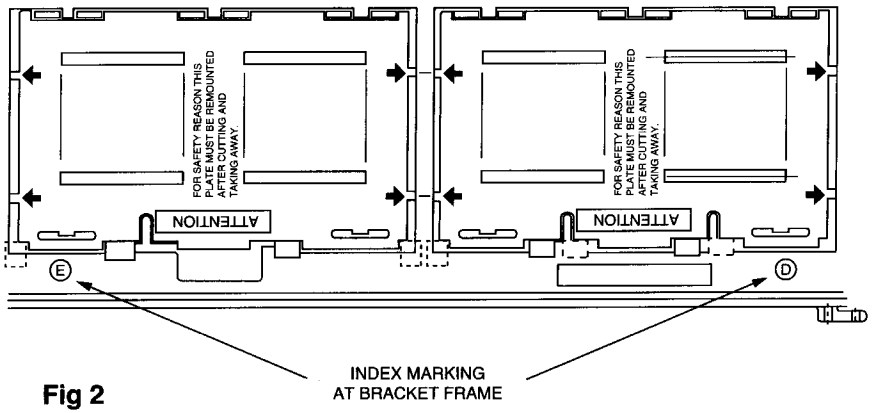


Fig 2

In the event of the plates requiring to be removed at a later stage, this can be achieved by inserting a screwdriver in the snap-recess indicated as in Fig 4 and lifting out.

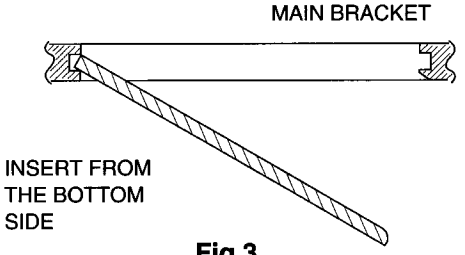


Fig 3

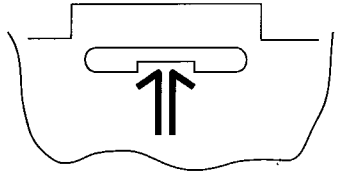


Fig 4

SECTION 3
SET - UP ADJUSTMENTS

- When complete readjustment is necessary or a new picture tube is installed, carry out the following adjustments.
- Unless there are specific instructions to the contrary, carry out these adjustments with the rated power supply.
- Unless there are specific instructions to the contrary, set the controls and switches to these settings :

◑ Contrast ..... 80% (or remote control normal)
☼ Brightness 50%

- Carry out the following adjustments in this order :

1. Beam landing
2. Convergence
3. Focus
4. White balance

Note: Testing equipment required.
1. Color bar/pattern generator
2. Degausser
3. DC power supply
4. Digital multimeter
5. Oscilloscope

Preparation:
- In order to reduce the influence of geomagnetism on the set's picture tube, face it east or west.
- Switch on the set's power and degauss with the degausser.

3-1. BEAM LANDING

1. Input the white signal with the pattern generator.
   CONTRAST, BRIGHTNESS } normal
2. Set the pattern generator raster signal to red.
3. Move the deflection yoke forward and adjust with the purity control so that the red is at the centre and the blue and the green take up equally sized areas on each side. (See Fig. 3-1 - 3-3)
4. Move the deflection yoke forward and adjust so that the entire screen becomes red. (See Fig. 3-1)
5. Switch the raster signal to blue, then to green and verify the condition.
6. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
7. If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Fig. 3-4)

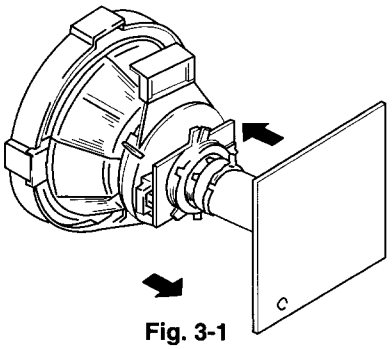


Fig. 3-1

Fig. 3-2

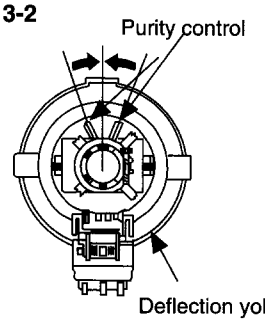
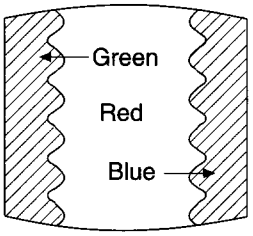


Fig. 3-3



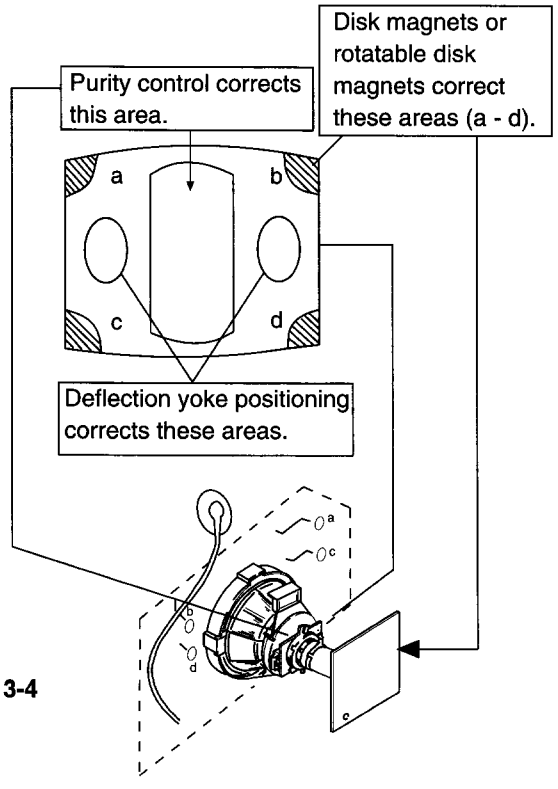


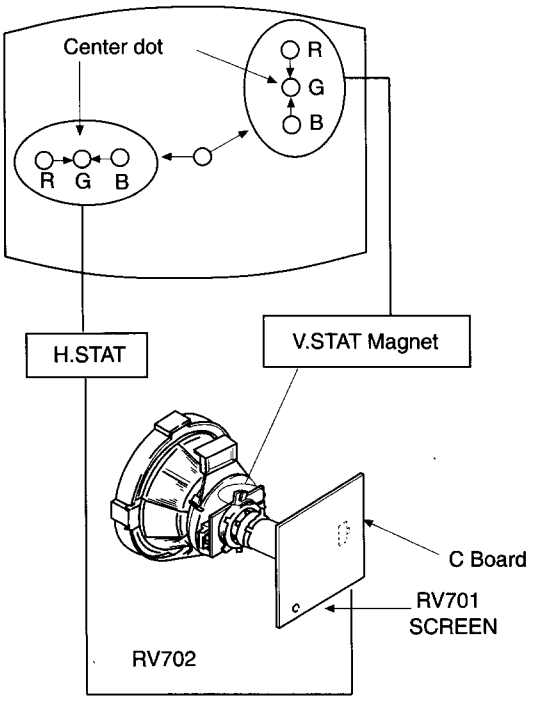
Fig. 3-4

3-2. CONVERGENCE

Preparation:

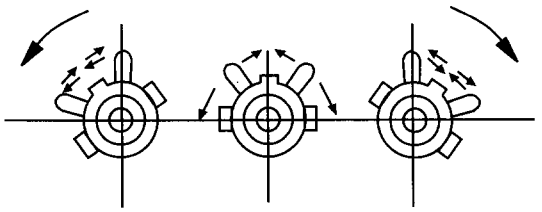
- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide a dot pattern.

(1) Horizontal and vertical static convergence

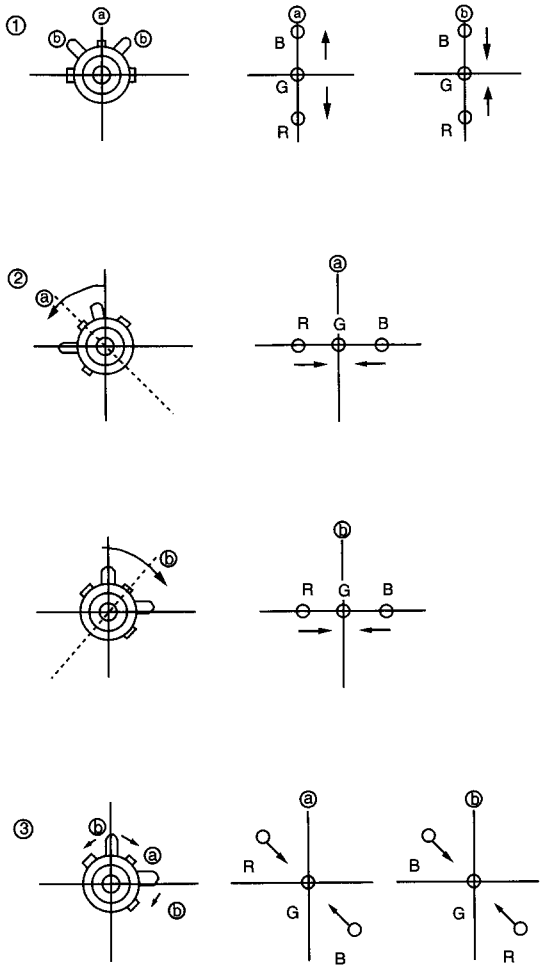


1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the centre of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the centre of the screen.
3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the centre of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner given below.
   (In this case, the H.STAT variable resistor and the V.STAT magnet influence each other)

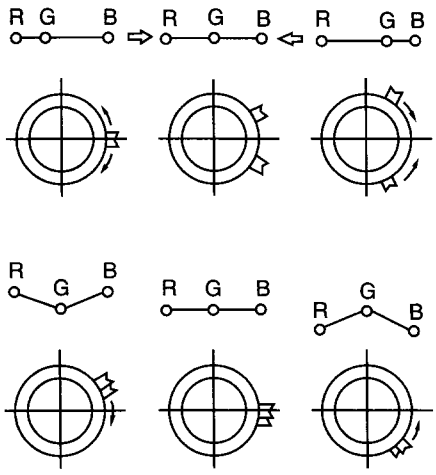
- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.

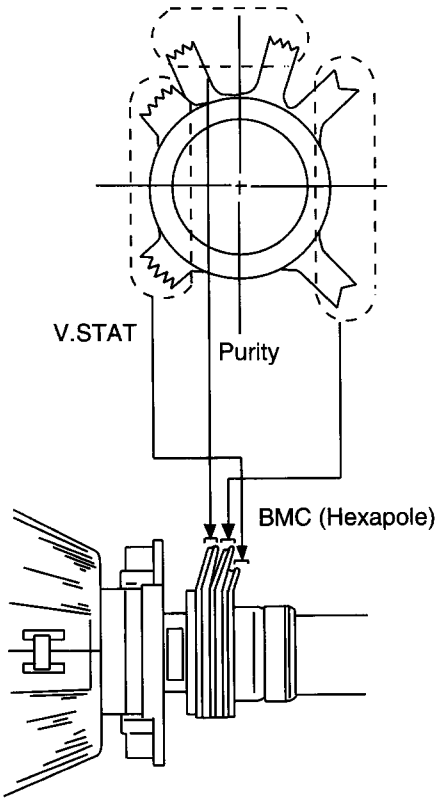


4. If the V.STAT magnet is moved in the direction of the ⓐ and ⓑ arrows, the red, green, and blue points move as shown below.



- Operation of BMC (Hexapole) Magnet





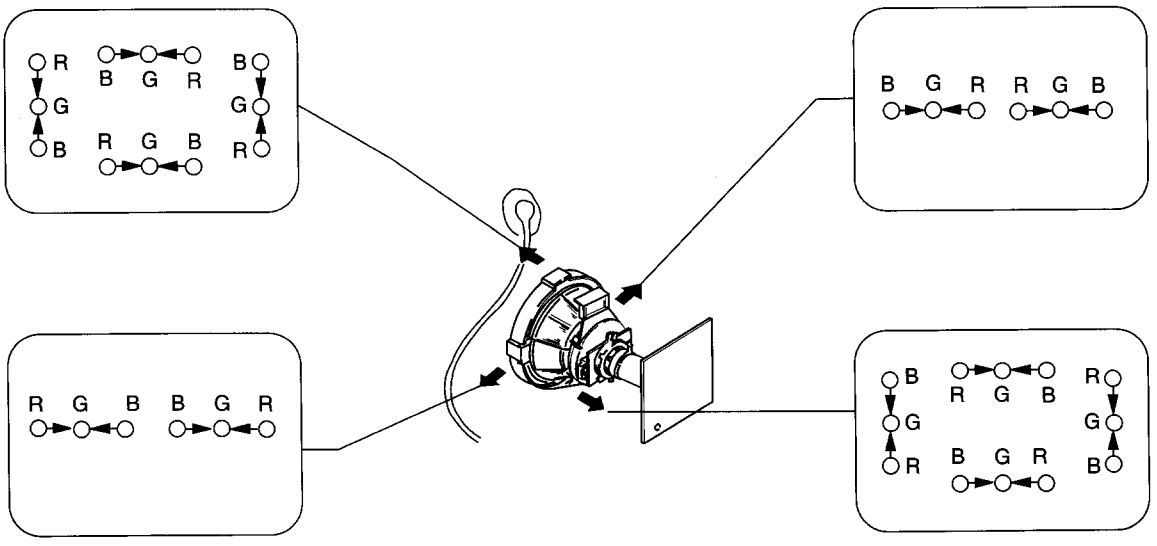
- The respective dot position resulting from moving each magnet interact, so be sure to perform adjustment while tracking.
  Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the centre of the screen (by moving the dots in the horizontal direction).

(2) Dynamic convergence adjustment.

Preparation:

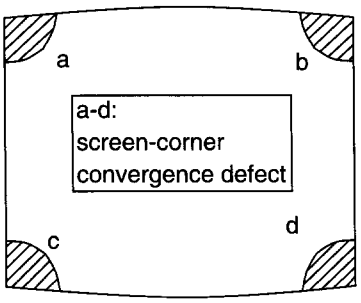
- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.

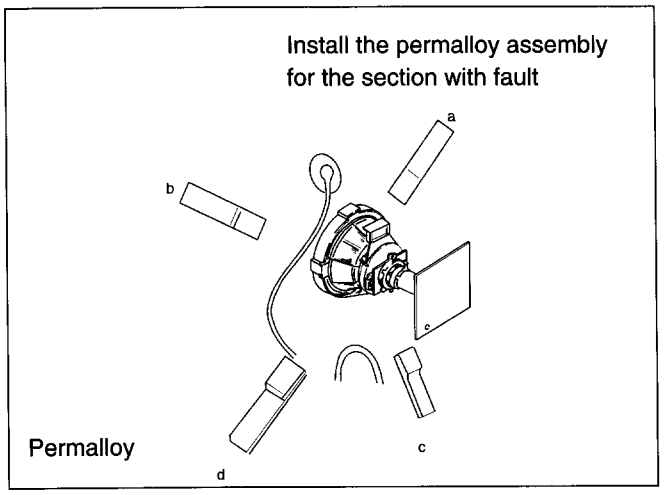
1. Slightly loosen the deflection yoke screws.
2. Remove the deflection yoke spacer.
3. Move the deflection yoke as shown in the figure below and optimize the convergence.
4. Tighten the deflection yoke screws.
5. Re-install the deflection yoke spacer.



(3) Screen corner convergence.

If you are unable to adjust the corner convergence properly, correct them with the use of permalloy assemblies.





3-3. WHITE BALANCE

G2 Setting

1. Switch the set into AV mode (apply no signal to the AV connectors).
2. Connect a Volt Meter to Test Point 1 on the A board.
3. Adjust RV01 to obtain a voltage of 3.0V ±0.3V.

White balance adjustment

1. Input an all white signal from the pattern generator.
2. Enter into the service mode.
3. Enter into Picture Adjustment service menu.
4. Select sub-contrast and adjust to 7.
5. Select the Green Drive and adjust so that the white balance becomes optimum.
6. Select the Blue Drive and adjust so that the white balance becomes optimum.
7. Press the TV button to return to TV operation.

PICTURE ADJUSTMENT

AFC mode	1
REF position	3
SCP BGR	1
SCP BGF	1
Trap Fo	7
Sub contrast	Adj
Sub colour	Adj
Sub brightness	Adj
Sub hue	Adj
Green drive	Adj
Blue drive	Adj
Green cutoff	Adj
Blue cutoff	Adj
Gamma	0
Pre / overshoot	0
Y delay	5

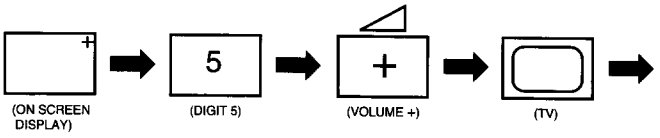
SECTION 4
CIRCUIT ADJUSTMENTS

4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied remote commander RM-839.

HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power switch of the set and enter into standby mode.
2. Press the following sequence of buttons on the Remote Commander.



"TT-- " will appear in the top right corner of the screen. Other status information will also be displayed.

3. Press MENU on the commander to obtain the following menu on the screen.

TEST MENU

> Picture adjustment
Geometry
Wide
MSP
IC status
Current TV status

4. Move to the corresponding adjustment using the ↓ button on the commander.
5. Press the + button to enter the selected adjustment.
6. Turn off the power to quit the service mode when adjustments are completed.

PICTURE ADJUSTMENT

AFC mode	1
REF position	3
SCP BGR	1
SCP BGF	1
Trap Fo	7
Sub contrast	Adj
Sub colour	Adj
Sub brightness	Adj
Sub hue	Adj
Green drive	Adj
Blue drive	Adj
Green cutoff	Adj
Blue cutoff	Adj
Gamma	0
Pre / overshoot	0
Y delay	5

GEOMETRY ADJUSTMENT

V Size	Adj
V Position	Adj
S Correction	Adj
V Linearity	Adj
H Size	Adj
H Position	Adj
Pin Amp	Adj
Pin Phase	Adj
AFC Bow	Adj
AFC Angle	Adj
EHT V	Adj
EHT H	Adj
Corner Pin	Adj

WIDE

V Aspect	43
V Scroll	31
Upper V Lin	0
Lower V Lin	0
Left Blanking	1
Right Blanking	11

MSP	
AGC ON/OFF	ON
Constant gain CDB	0
FM prescale FMP	36
Zwei mono-st WHI	36
Zwei st-mono WLO	18
Zwei mono-bi WMH	36
Zwei bi-mono WLO	18
Time zwei WML	41
Fawct limit	10
Fawct soll init FAW	12
Fawer tol	2
Nicam Err Max CCT	10
Nicam Err Min	0
Nicam Prescale NIP	97
Time Nicam	31
Carrier mute CRM	OFF
Audio clock ACO	HIZ
Scart prescale	25
Scart volume	64

IC STATUS (CXA2000 / CXA2040)	
CXA2000	
H lock	1
IKR	1
VNG	0
X-RAY	0
Colour system	3
CV1 Sync	1
CXA2040	
Sync sep	1
S1 mode pin	01
S2 mode pin	01
TUNER	
Tuner status	01101011

TV STATUS	
Text system	C TEXT/TV TEXT
Dolby	NO/YES
Text language set	WEST/EAST/RUSSIAN
Menu language set	WEST/EAST/RUSSIAN
Destination	B/D/U/K/L/E/A/R
Scart 16:9	OFF/ON
RGB priority	OFF/ON
Ageing	OFF/ON
Size	29/25
Colour trap sw	SECAM/ALL
Velocity mod	ON/OFF
AFT STATUS	WINDOW/HIGH/LOW

SUB BRIGHTNESS ADJUSTMENT

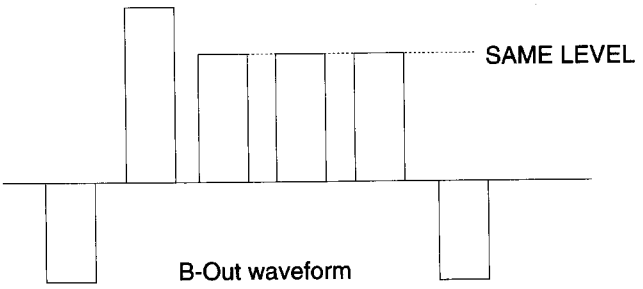
1. Input a Phillips pattern.
2. Set the picture control to minimum.
3. Enter into the Picture Adjustment Service Menu.
4. Adjust the Sub-Brightness data so that there is barely a difference between the 0 IRE and 10 IRE signal.

SUB CONTRAST ADJUSTMENT

1. Input a video that contains a small 100% area on a black background.
2. Set the picture control to maximum.
3. Connect an oscilloscope to pin 3 of CN301 (A board).
4. Enter into the Picture Adjustment Service Menu.
5. Adjust the Sub-contrast data to obtain a black to white amplitude of 2.50 volts.

SUB COLOUR ADJUSTMENT

1. Receive a PAL Colour Bar video signal.
2. Connect an oscilloscope to pin 3 of CN301 (A board).
3. Enter into the Picture Adjustment Service Menu.
4. Adjust the sub colour data so that cyan, magenta and blue colour bars are of equal height.



NOTE: The data shown in the TV STATUS table is dependant on destination, screen size and country.

SYSTEM B/G, D/K, I & L I.F ADJUSTMENT

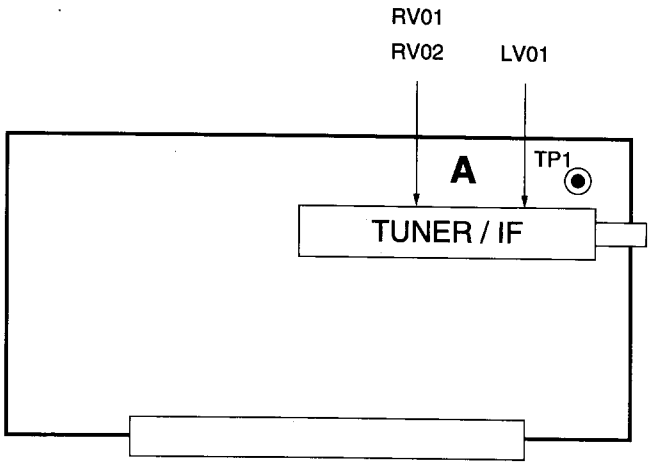
1. Input an off air signal of between 60-100dBuV / 75 ohm terminated, via the tuner socket.
2. Enter into the I.F adjustment service mode (i.e. " TT 59 ") to fix the I.F frequency to 38.9 MHz.
3. Enter into the service mode and select "Current TVStatus".
4. Adjust the I.F coil (LV01) until the "AFT Status" indicates a " Window " condition.

SYSTEM L BAND 1 I.F ADJUSTMENT

1. Input an off air signal of between 60-100dBuV / 75 ohm terminated, via the tuner socket.
2. Enter into the I.F adjustment service mode (i.e. " TT 59 ") to fix the I.F frequency to 34.2 MHz.
3. Enter into the service mode and select "Current TVStatus".
4. Adjust the RV02 until the "AFT Status" indicates a " Window " condition.

TUNER AGC ADJUSTMENT

1. Receive a signal of 63dBuV / 75 ohm terminated via the tuner socket.
2. Measure the voltage at test point 1 (A board).
3. Adjust RV01 to obtain a voltage of 3.0V ± 0.3V.



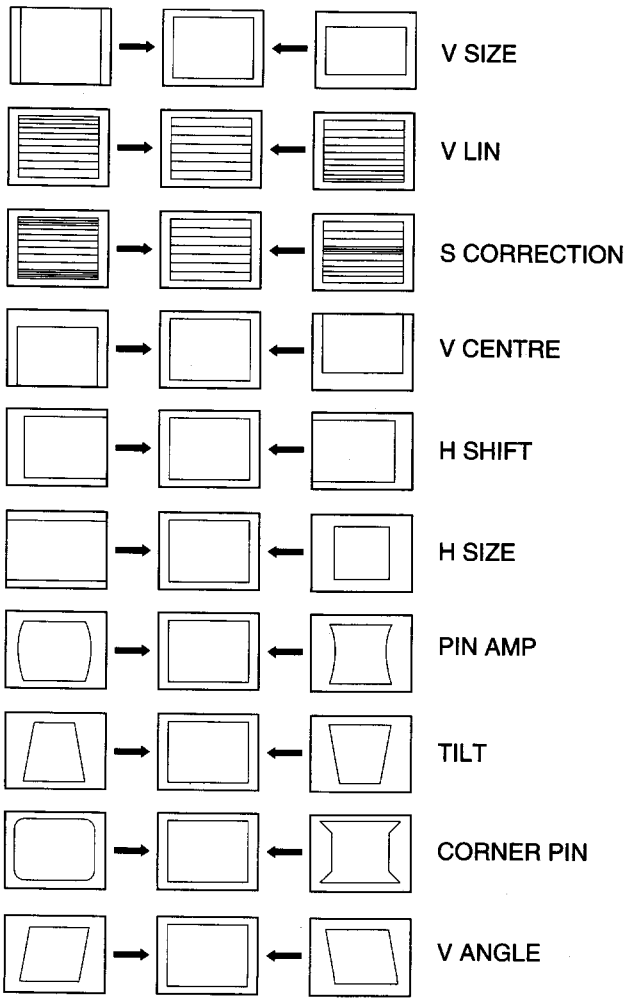
- A Board component side -

DEFLECTION SYSTEM ADJUSTMENT

1. Enter into the Geometry Adjustment Service Menu.
2. Select and adjust each item in order to obtain the optimum image.

GEOMETRY ADJUSTMENT

V Size	Adj
V Position	Adj
S Correction	Adj
V Linearity	Adj
H Size	Adj
H Position	Adj
Pin Amp	Adj
Pin Phase	Adj
AFC Bow	Adj
AFC Angle	Adj
EHT V	Adj
EHT H	Adj
Corner Pin	Adj



4-2. TEST MODE 2:

Is available by pressing Test button twice, OSD " TT " appears. The functions described below are available by pressing the two numbers. To release the Test mode 2, press 0 twice, or switch the TV into stand-by mode.

00	Switch test mode 2 off
01	Picture maximum
02	Picture minimum
03	Volume 30%
04	Set service menu mode
05	Set production menu mode
06	Volume 80%
07	Set ageing condition
08	Set shipping condition
09	Language reset
10	No function
11	Adjustment without OSD
12	Dummy
13	Display TV configuration
14	Forced AV 6:9 mode
15	Reset LPM from ROM data
16	copy LPM to reset memory
17	Preset label for AV sources
18	RGB priority on/off
19	Clear all preset labels
20	No function
21	Sub contrast
22	Sub colour
23	Sub brightness
24	Set destination = U
25	Set destination = D
26	Set destination = B
27	Set destination = K
28	Set destination = L
29	Set destination = E
30	No function
31	Set destination =A
32	Dummy
33	Auto AGC
34	Dummy
35	Manual AGC adjust

36-40	Dummy
41	Re-initialise NVM
42	Production use only
43	Initialise geometry settings
44	Initialise all favourite pages = 100
45	Channel locks = off
46	Dealer commander mode
47	Default MSP settings
48	Restore NVM test byte
49	Delete NVM test byte
50-60	No function
61	Turn on Dolby Pro Logic mode
62	White noise to left speaker
63	White noise to right speaker
64	White noise to centre speaker
65	White noise to rear speaker
66	Set standard stereo mode
67	Set Pro Logic normal mode
68	Set Pro Logic wide mode
69	Set Pro Logic phantom mode
70	No function
71	Picture rotation on/off
72	Dolby register settings
74	No function
75	Reset picture colour balance
76	Reset picture geometry
77	Reset sound settings
78	Reset error codes in the NVM
79-99	No function

4-3. BE-3D SELF DIAGNOSTIC SOFTWARE

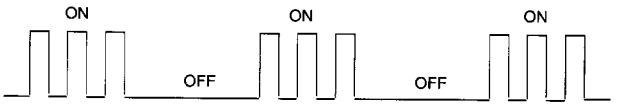
The identification of errors within the BE-3D chassis is triggered in 1 of 2 ways :- 1: Bus busy or 2: Device failure to respond to IIC. In the event of one of these situations arising the software will first try to release the bus if busy (Failure to do so will report with continuous flashing LED) and then communicate with each device in turn to establish if a device is faulty. If a device is found to be faulty the relevant device number will be displayed through the led (Series of flashes which must be counted) See Table 1, non fatal errors are reported with this method.

Table 1

ERROR	LED ERROR COUNT
Protection circuit trip < ANY TIME >	02
IIC SCL LOW < POWER UP ONLY >	03
IIC SDA LOW < POWER UP ONLY >	04
IIC SDA & SCL LOW < POWER UP ONLY >	05
Jungle/Choroma controller no acknowledge < POWER UP ONLY >	06
Video Switch no acknowledge < POWER UP ONLY >	07
Tuner no acknowledge	08
MSP no acknowledge	09
NVM no acknowledge	10
M3L TXD LOW < POWER UP ONLY >	11
M3L RXD LOW < POWER UP ONLY >	12
M3L ENABLE LOW < POWER UP ONLY >	13
M3L TXD & RXD LOW < POWER UP ONLY >	14
Compact Text test fail < POWER UP ONLY >	15
AV switch cannot power on reset	16
Cannot initialise jungle	17
NVM acknowledge fail after initialisation	18
Multiple devices with no acknowledge < POWER UP ONLY >	19
Compacttext run-time failure	20
AVSWITCH response failure after power up	21
JUNGLE/CHROMA controller response failure after power up	22
CompactText does not respond	23

Flash Timing Example : e.g. error number 3.

Stby LED



BLOCK DIAGRAM (1)

BLOCK DIAGRAM (

STBY 5V
D901 RES
Q900
RESP
SIRCS
IC900
INFRARED RECEIVER

CN902
ROT COIL 3
V OUT — 48
E/W 5
V OUT + 46
H DRIVE 6
V SYNC 45
HFBP 7
EHT 8
ABL 43
DGC RELAY 42
PROT 9
AFC 12
SIRCS 39
SPKRL 13
STBY 38
SPKRR 15
STBY LED 35
KEY 1 32
VM OUT 20
MUTE 31
H/P R 21
H/P L 22
R IN 23
L IN 28
V IN 24
C IN 25
Y IN 26
TO A BOARD CN11

S902 S901 S900

D505 D504 D507
SWITCH Q501
SWITCH Q503
SWITCH Q502

IC500 V OUT
V + I/P
F B-PLS
V OUT
Vcc OUT
V - I/P
D803 V BOOST +15V

T803 FBT
D810 200V RECT
135V
FBT —15V
D502 -15V RECT
FBT +15V
D503 +15V RECT
C 200V +B -15V +15V H2 H1
HV TO PICTURE TUBE
FV TO C BOARD J701 (G4)
D809 1000V RECT
200V
G2 H2
CN804
TO C BOARD CN701

IC800
PIN CORRECTION
PIN OUT Q800, 801
D807
L801
L802 +135V
L805
L811
T800 PMT
L804 HLC
D815 H CENT
D808 H CENT
1 LEFT
2 CENTRE
3 RIGHT

CN800
V+ V- H- H+
V- V+ V DY
H+ H- H DY
DY ASSY

D618 PROJECT
SWITCH Q805
H DRIVE Q803
T804 HDT
H OUT Q802
D800 H DUMPER
D801 H DUMPER +9V

IC1201
HEADPHONE AMP
R L

MUTE Q1204
MUTE Q1203
MUTE SWITCH Q1202
7.5V D1201
B + SWITCH Q1201
MUTE SWITCH Q1200
MUTE

IC1200
AUDIO AMP
L IN R IN
L OUT R OUT
CN1200
L OUT R OUT
SP (L) SP (R)

CN1401
VM OUT
TO VM BOARD CN1015

HP L HP R MUTE SW
J900 HEADPHONES

CN900
S-VIDEO
Y C
VIDEO R L

CN801
ROT COIL FBT 15V
TO D2 BOARD CN1801

D619 PROTECT +15V
RELAY DRIVE Q607
RY600
CN601
DGC
THP600
S601 POWER
CN603
AC IN
F601
LF600 LF601 L.F.T
D601
MAIN RECT D600
D606
D605

IC602
ERR-AMP
REG
POWER OFF SWITCH Q605,606,D617,625
+135V
+33V
D615
STANDBY SWITCH Q602 - Q604
D616
D608 D626
IC601
OPTO-COUPLER
SOFT START Q601
D603 REF
D604
T601 SRT
D609 135V RECT
D612 15V RECT
D610 7.5V RECT
D611 7.5V RECT
D613 + 21V RECT
D614 — 21V RECT
IC606 9V REG 9V
IC604 5V REG STDBY 5V
IC603 5V REG 5V

IC600
POWER CONTROL
INH F/B OCP C
Vcc B D IN D OUT
D607

D
HV OUT, PIN OUT
POWER SUPPLY
SIRCS RECEIVE
INDICATOR
AUDIO IN
Y-CHROMA IN
HEADPHONE AMP

TU101
SCL SDA AFC AGC MON1
RF IN
+33V +5V
CVBS QSS AM AF

CN201
CVBS OUT B19
CVBS IN B20
CVBS/Y IN A20
SVHS-C IN A15
MODE B8
MODE A8
VIDEO BUFF Q110 -112

CVBS OUT A19
BLANKING B16 FB-1
RED IN B15 R1
GREEN IN B11 G1
BULE IN B7 B1

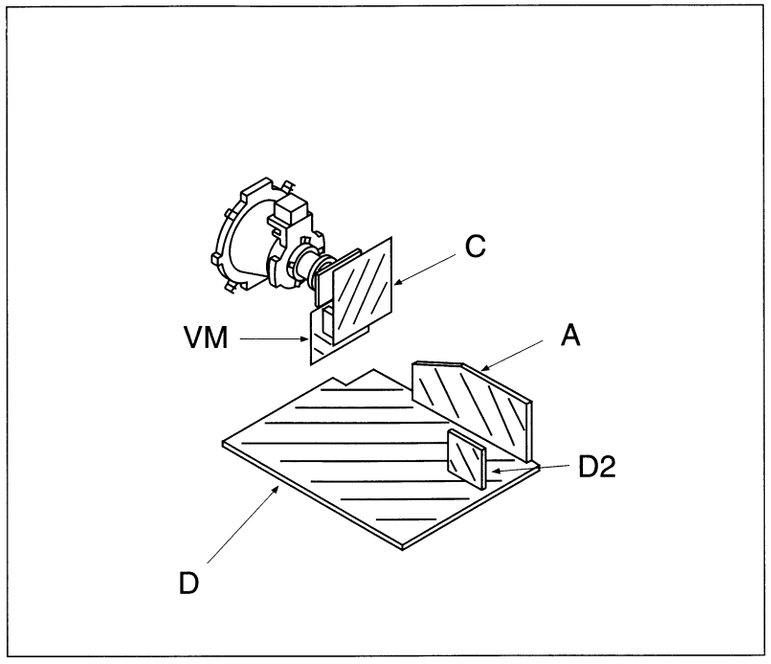
AUDIO R IN B2
AUDIO L IN B6
AUDIO R IN A2
AUDIO L IN A6
AUDIO L OUT B3
AUDIO R OUT B1
AUDIO L OUT A3 L
AUDIO R OUT A1 R

CF120
KV-29X1B only !

A
TUNER, AUDIO CONTRO
VIDEO SW
DIGITAL SIGNAL PROCE
Y/C JUNGLE
MICRO-CONTROLLER

SCL, SDL
AFT
AGC MONT
IC201
DEO SW
V
CVBS OUT 13
VIDEO BUFF Q201
CV BS
SVHS-Y 11
SVHS-C 9
V-1
V-2
CVBS OUT AV-2 15
VIDEO BUFF Q202
V-3
V3,Y3,C3
IC202
NAL PROCESSING
L OUT HP 59
R OUT HP 60
HPL
HPR
L OUT SP 56
BUFF Q204
SPL
AM) R OUT SP 57
BUFF Q203
SPR
IC203
AUDIO SW
L OUT AV-2 47
R OUT AV-2 48
RESET 61
BUFF Q207
BUFF Q206
1
-1
R3,L3
IC302
BASE BAND DELAY-LINE
SSCP 5
R-Y OUT 11
B-Y OUT 12
B-Y IN 14
R-Y IN 16
IC303
SECAM DECODER
R-Y OUT 11
B-Y OUT 12
CVBS IN 20
SSCP IN 19
IDENT 1
IC301
Y/C JUNGLE
SCL 50
SDA 51
SECAM REF 1
SSCP OUT 10
R-Y OUT 3
B-Y OUT 4
B-Y IN 8
R-Y IN 7
CVBS IN 53
SVHS-Y IN 55
SVHS-C IN 57
R1
R-1IN 12
G1
G-1 IN 13
B1
B-1 IN 14
FB1
FB-1 IN 11
R2
R-2 IN 17
G2
G-2 IN 18
B2
B-2 IN 19
FB-2 IN 15
FB2
HB-2 IN 16
COR
R OUT 22
G OUT 24
B OUT 26
1K IN 27
SYNC OUT 48
PROTECT Q330
HS IN 47
VS IN 46
Y OUT 5
Y IN 6
SWITCH Q300
V+ DRIVE 32
E-W 33
V-DRIVE 31
H OUT 37
AFC PIN 38
L2 FIL 39
BUFF Q332
ABL IN 28
VM 49
VM AMP Q331
SWITCH Q306
FB2
IC1
MICRO-CONTROLLER
IC2
NVM
SCL 6
SDA 5
7
LEVEL SHIFT Q305
V-BLK 8
AGC MONI1 67
AFT 66
STDBY 5V
+5V 3
OUT 1
IC4 RESET
RST
RST 2 16
63
AUDIO SW 10
AUDIO SW Q205
IC3
ROM
A16
A0
D7
D0
LEVEL SHIFT Q4,5
SCL 59
SDA 58
WR 4
SDA 1 56
SCL 1 57
COIL 11
TRAP 9
16:9 3
PROT 2
DGC 78
IR 80
STBY 62
LS 64
LED 61
K1 65
MUTE 7
AMP Q80,81
BUFF Q1, 1002
RED OUT 45
GREEN OUT 46
BLUE OUT 47
BLANKING 48
COR 49
CDR
HS/SSCP 54
VS 55
VS 79
RGB-S 6
BUFF Q10
BUFF Q11
BUFF Q12
R2
G2
B2
SWITCH Q17,18
H SYNC
SWITCH Q15,16
V SYNC
BUFF Q304
AFC
CN3
R 1
G 2
B 3
CUT OFF 6
CN1
3 ROTATION COIL
V+ 48
V+ DRIVE
16:9 4
EAST/WEST DRIVE
E-W 5
V—DRIVE
V- 46
H DRIVE
H OUT 6
V SYNC
V SYNC 45
H FLYBACK
HFBP 7
EHT
EHT 8
ABL
ABL 43
PROTECTION
RROT 9
DGC RELAY
DGC 42
AFC
AFC 12
SIRCS
IR 39
AUDIO OUT SPEAKER
SPL 13
CHASSIS STANDBY
STBY 38
AUDIO R OUT SPEAKER
SPR 15
LUMISPONDER
LS 16
STANDBY LED
LED 35
FRONT KEY 1
K1 32
VM
VM 20
AUDIO MUTE
MUTE 31
AUDIO R OUT HP
HPR 21
AUDIO L OUT HP
HPL 22
AUDIO R IN AV-3
R3 23
AUDIO L IN AV-3
L3 28
CVBS IN AV-3
V3 24
S-VHS C IN AV-3
C3 25
S-VHS Y IN AV-3
Y3 26
TO D BOARD CN902
CN703
1 R
2 G
3 B
6 CUT OFF
R DRIVE, BKG Q702, 703
G DRIVE, BKG Q705, 706
B DRIVE, BKG Q708, 709
CUT OFF Q711
R OUT Q704
G OUT Q707
B OUT Q710
D701
TO D BOARD CN804
CN701
1 G2
2 + 200V
6 H2
D711 PROTECT
H1
H2
RCV
RV702 H STAT
RV701 SCREEN
G2 (1000V)
C (RGB OUT)
V901 PICTURE TUBE
R
G
B
H RCV G2 G4 HV
TO D BOARD T803 (FBT)
VM (VM AMP)
CN1718
CN1015
TO D BOARD CN1401
4 VM OUT
VM AMP Q1701, 1702, 1708, 1709
VM AMP BUFFER Q1704
+9V
DRIVE SW Q1707
135V
VM OUT Q1703, 1706
VM
GND
QP
VM
NECK ASSY
D2 (ROTATION AMP)
CN1801
TO D BOARD CN801
4 ROTATION
6 FBT 15V
IC1802
ROTATION AMP
CN1803
ROT +
ROT -
TO ROTATION COIL
IC1801
9V REG
FBT 15V

5-2. CIRCUIT BOARDS LOCATION



5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note :

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.
  k = 1000 , M = 1000K
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5 mm
Rating electrical power ¼ W

- : nonflammable resistor.
- : internal component.
- : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ⊥ : earth - ground.
- ⏚ : earth - chassis.
- # : no mounted.

Note : The components identified by shading and marked ⚠ are critical for safety. Replace only with the part number specified.

Note : Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

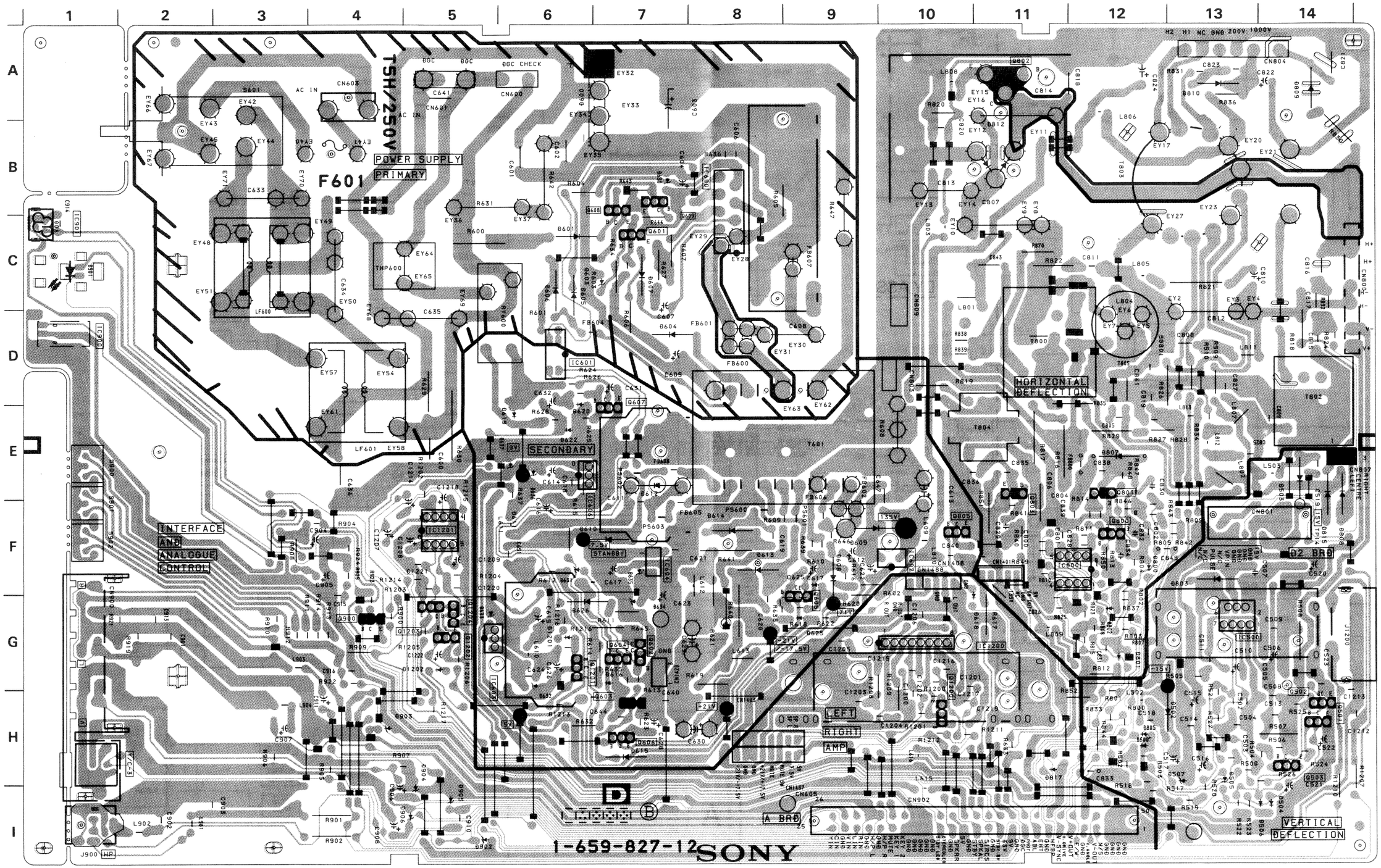
Reference information

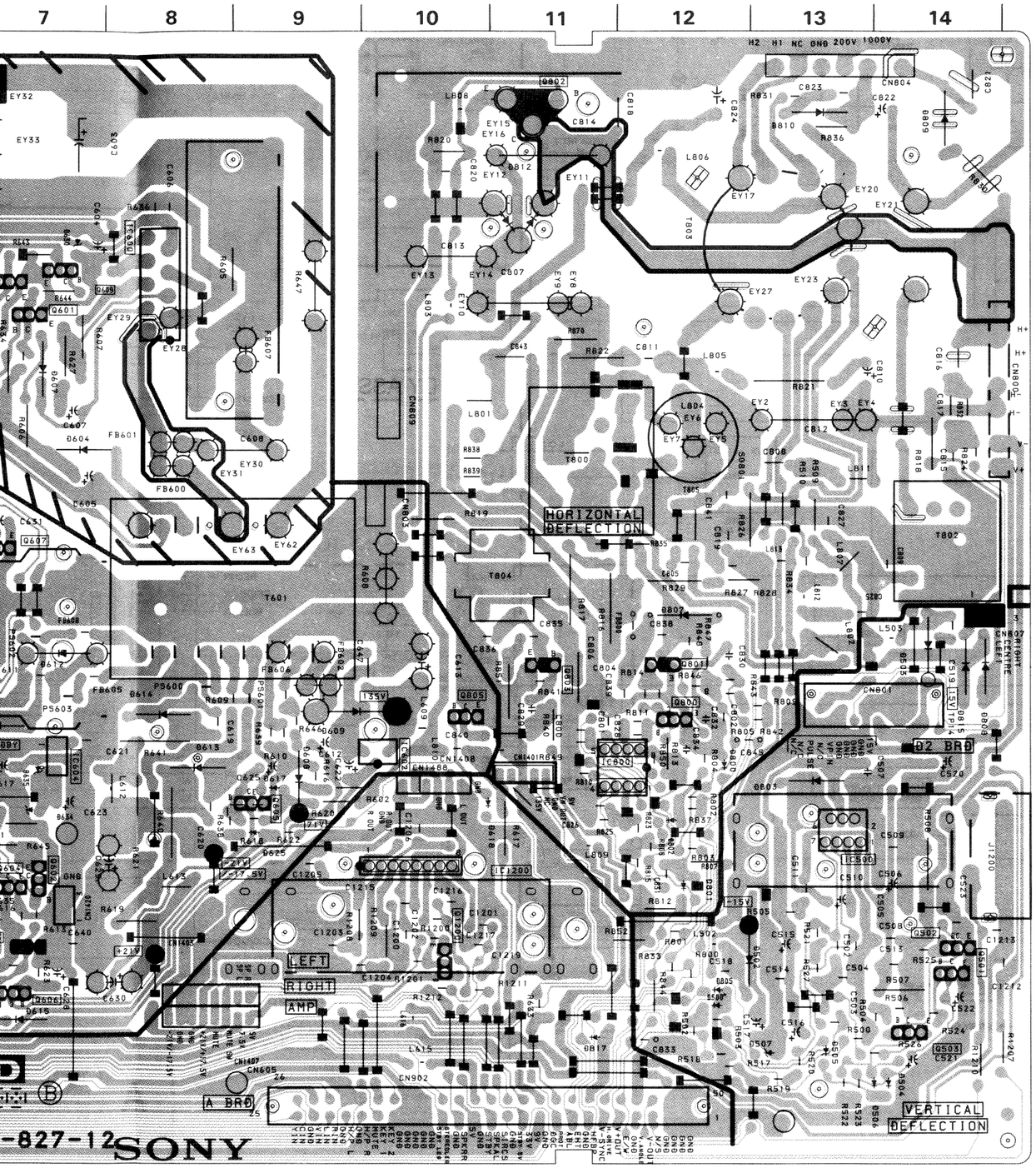
RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: ※	ADJUSTABLE RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

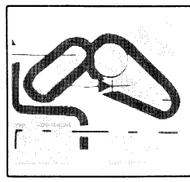
- Readings are taken with a colour-bar signal input.
- Readings are taken with 10MΩ digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
- : B+ bus.
- : signal path. (RF)

D [HV OUT, PIN OUT, POWER SUPPLY, CONTROL SW, AUDIO IN
Y-CHROMA IN, HEADPHONE IN, SIRCS RECEIVE, INDICAITON]

D Board



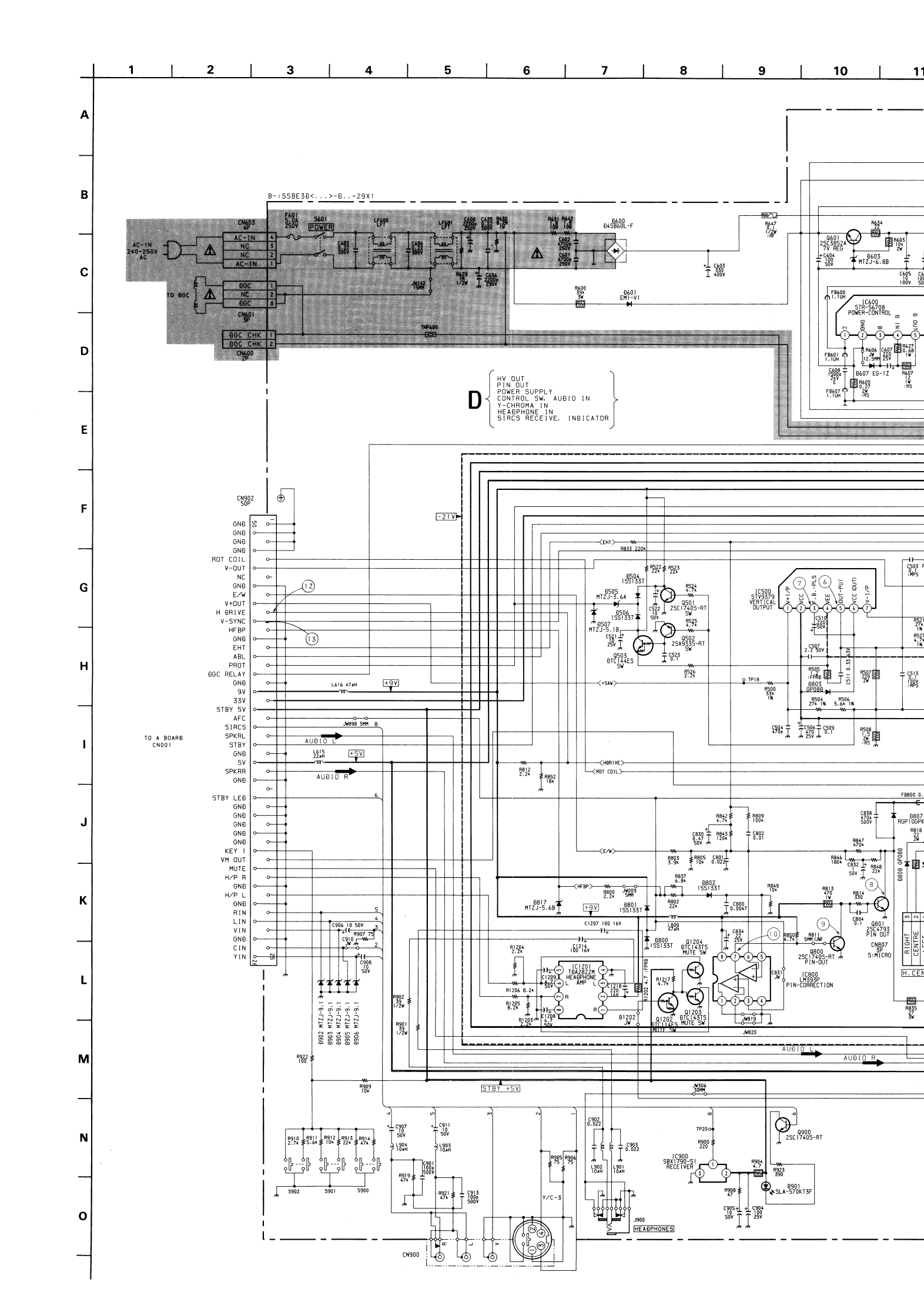


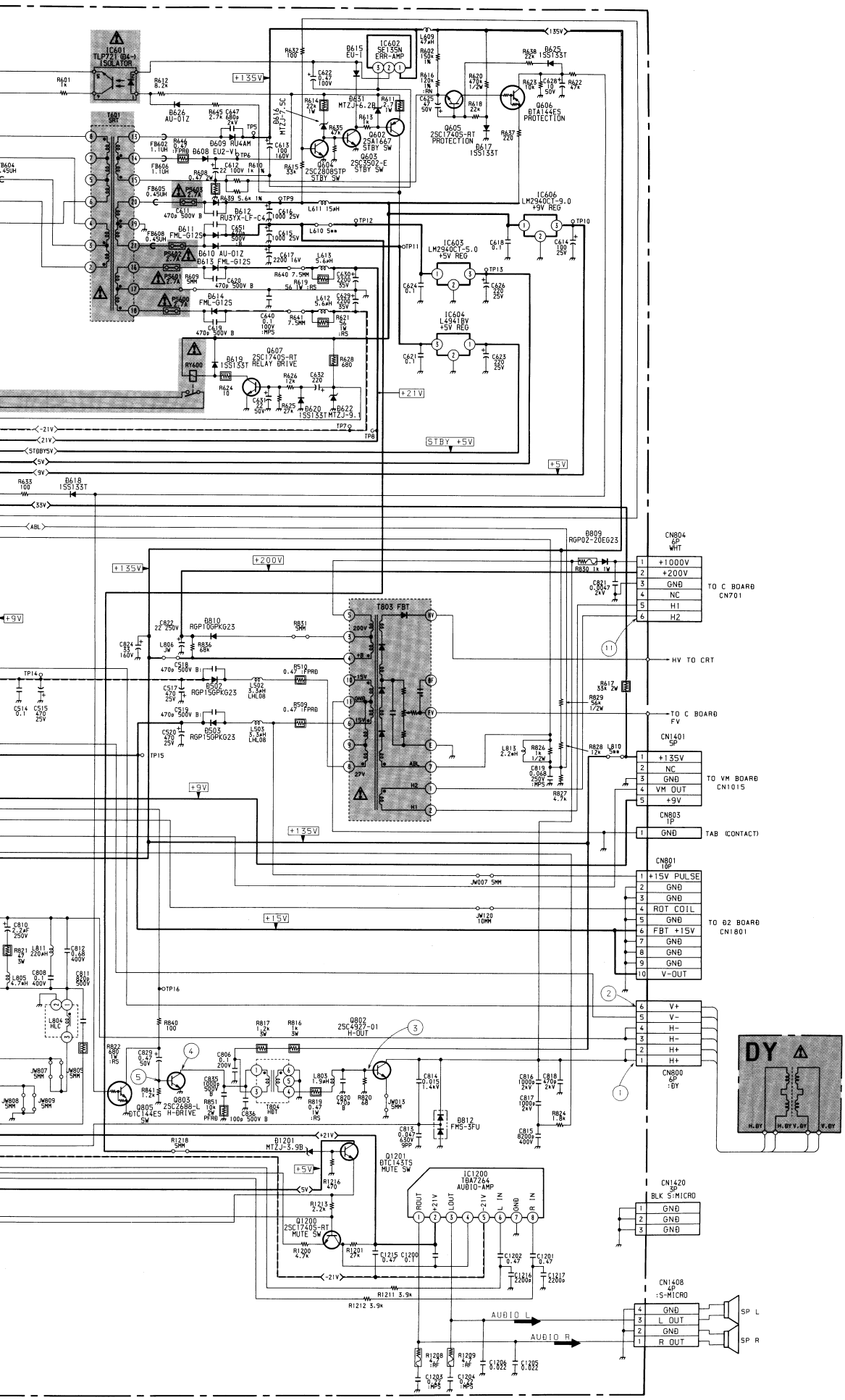


NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

D BOARD

IC		DIODE	
IC500	G-13	D600	A-7
IC600	B-8	D601	C-6
IC601	D-6	D603	C-7
IC602	F-10	D604	D-7
IC603	G-5	D605	C-6
IC604	F-7	D606	C-6
IC606	E-6	D607	C-7
IC800	F-12	D608	F-9
IC900	D-1	D609	F-9
IC1200	G-10	D610	F-7
IC1201	F-5	D611	F-6
		D612	E-7
TRANSISTOR		D613	F-8
Q501	H-14	D614	F-8
Q502	H-14	D615	H-7
Q503	H-14	D616	G-7
Q601	C-7	D617	F-9
Q602	G-7	D618	F-11
Q603	H-7	D619	E-6
Q604	G-7	D620	E-6
Q605	F-9	D622	E-6
Q606	H-7	D625	G-9
Q607	D-7	D626	G-6
Q800	F-12	D631	F-6
Q801	E-12	D800	F-12
Q802	A-11	D801	G-12
Q803	E-11	D802	G-12
Q805	F-10	D803	F-13
Q900	G-4	D807	E-12
Q1200	H-10	D808	E-14
Q1201	G-6	D809	A-14
Q1202	G-5	D810	A-13
Q1203	G-5	D812	B-11
Q1204	G-5	D815	E-14
DIODE		D817	H-11
D500	H-12	D901	C-1
D502	H-13	D902	I-5
D503	I-14	D903	H-4
D504	H-11	D904	H-5
D505	H-13	D905	I-5
D506	I-14	D906	I-5
D507	H-13	D1201	G-6


B-:SSBE3Ø<...>-Ø..-29X!
AC-IN 240-250V AC
CN603 4P
AC-IN
NC
NC
AC-IN
F601 3.0A 250V
S601 POWER
LF600 LF1
LF601 LF1
D600 D4SB60L-F
C605 330 400V
TO ØGC
ØGC
NC
ØGC
CN601 3P
ØGC CHK
ØGC CHK
CN600 2P
THP600
R600 39k 5W
D601 EM1-V1
Q601 2SC3852A 7V REG
D603 MTZJ-6.8B
IC600 STR-S6708 POWER-CONTROL
D607 EG-1Z
D
HV OUT
PIN OUT
POWER SUPPLY
CONTROL SW. AUDIO IN
Y-CHROMA IN
HEADPHONE IN
SIRCS RECEIVE. INDICATOR
CN902 50P
TO A BOARD CN001
-21V
+9V
+5V
+SAW
EHT
HDRIVE
ROT COIL
E/W
HFBP
AUDIO L
AUDIO R
STBY +5V
IC500 STV9379 VERTICAL OUTPUT
IC1201 TDA2822M HEADPHONE AMP
IC800 LM393P PIN-CORRECTION
Q800 2SC1740S-RT PIN-OUT
Q900 2SC1740S-RT
IC900 SBX1790-51 RECEIVER
D901 SLA-570KT3F
CN807 3P S-MICRO
H.CENTER
RIGHT
CENTRE
CN900
J900 HEADPHONES
S902
S901
S900
Y/C-3

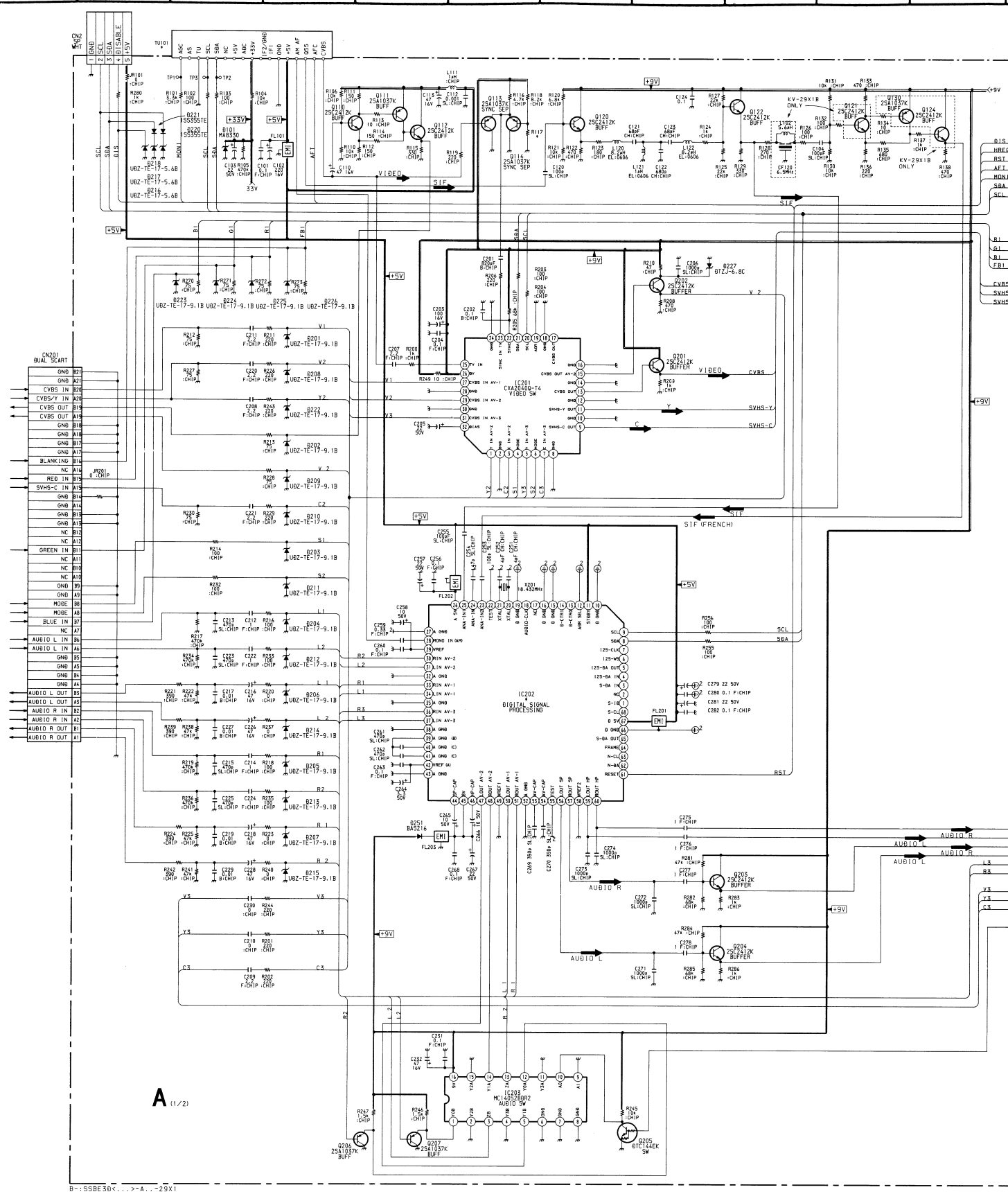

IC401 TLP721 (D4-) ISOLATOR
T601 SMT
IC602 SE135N ERR-AMP
Q605 2SC17405-RT PROTECTION
Q606 BTA144GS PROTECTION
Q607 2SC1740S-RT RELAY DRIVE
IC606 LM2940CT-9.0 +9V REG
IC603 LM2940CT-5.0 +5V REG
IC604 L4941BV +5V REG
RY600
+135V
+200V
+21V
-21V
+9V
+5V
STBY +5V
T803 FBT
CN804 6P WHT
+1000V
+200V
GND
NC
H1
H2
TO C BOARD CN701
HV TO CRT
TO C BOARD FV
CN1401 5P
+135V
NC
GND
VM OUT
+9V
TO VM BOARD CN1015
CN803 1P
GND
TAB (CONTACT)
CN801 10P
+15V PULSE
GND
GND
ROT COIL
GND
FBT +15V
GND
GND
GND
V-OUT
TO B2 BOARD CN1801
CN800 6P :DY
V+
V-
H-
H-
H+
H+
DY
H.DY
H.DY.V.DY
V.DY
IC1200 TBA7264 AUDIO-AMP
ROUT
+21V
LOUT
-21V
L IN
GND
R IN
CN1420 3P BLK S-MICRO
GND
GND
GND
CN1408 4P :S-MICRO
GND
L OUT
GND
R OUT
SP L
SP R
AUDIO L
AUDIO R

D BOARD
TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table			
Ref No	B Base	C Collector	E Emitter
Q501	-0.1	0.2	-
Q502	0.1	-5.8	-
Q503	-5.8	-12.0	-12.0
Q602	72.0	7.5	72.7
Q603	0	72.0	-
Q604	0.7	-	-
Q605	0.5	-	0.3
Q606	-	-	12.0
Q607	-	12.0	-
Q800	0.2	3.1	-
Q801	0.3	17.0	-
Q802	-0.2	143.3	-
Q803	-0.6	99.8	-
Q805	-	3.6	-
Q900	-	5.4	-
Q1200	2.9	21.5	4.6
Q1201	3.4	5.0	3.0
Q1202	2.8	-	-

D BOARD IC VOLTAGE TABLE

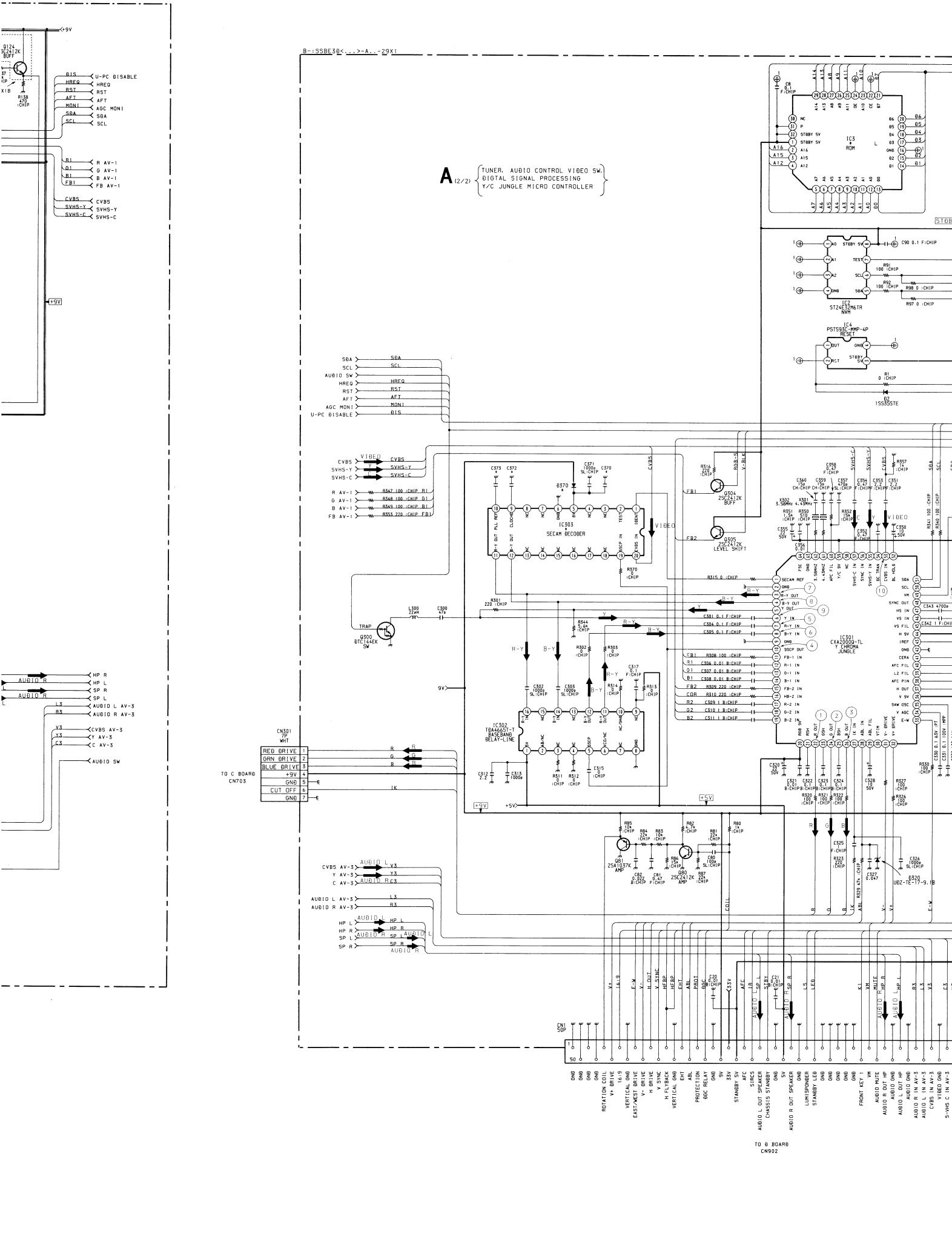
IC Voltage Table		
Ref No	Pin No	Voltage (V)
IC500	1	1.5
	2	15.0
	3	-12.3
	4	-14.0
	5	0.1
	6	15.2
	7	1.4
IC600	1	170.0
	2	-62.4
	3	-62.6
	4	-62.2
	5	-62.0
	6	-62.6
	7	-62.4
	8	-62.0
	9	-58.0
IC601	1	64.3
	2	63.0
	3	-62.5
	4	-58.6
IC602	1	135.0
	2	63.2
	3	-0.1
IC800	3	0.9
	5	1.5
	6	2.0
	7	0.2
	8	9.0
IC1200	2	21.7
	4	21.5
	5	-21.7
IC1201	1	4.0
	2	9.0
	3	4.0
	5	0.5
	8	0.5

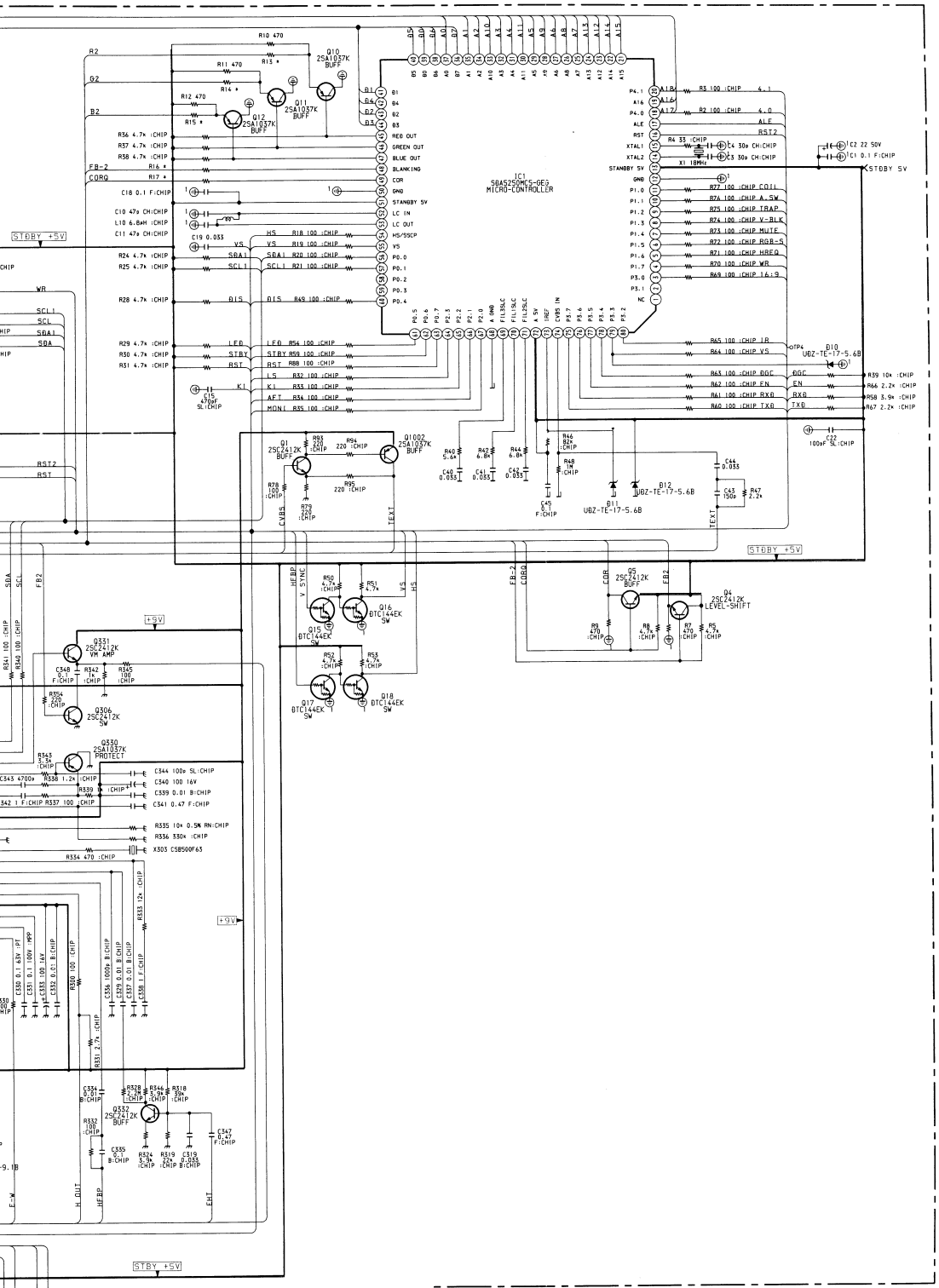


B-:SSBE3D<...>-A..-29X!

A BOARD * MARK

Ref. No. \ Model	29X1A	29X1B	29X1D	29X1E	29X1K	29X1L	29X1R	29X1U
C370	—	2.2UF	2.2UF	2.2UF	2.2UF	—	2.2UF	—
C372	—	0.1UF	0.1UF	0.1UF	0.1UF	—	0.1UF	—
C373	—	0.22UF	0.22UF	0.22UF	0.22UF	—	0.22UF	—
D370	—	BAS216	BAS216	BAS216	BAS216	—	BAS216	—
IC3	TMS27PC010A-15FMBE101	TMS27PC010A-15FMBE101	TMS27PC010A-15FMBE101	TMS27PC010A-15FMBW101	TMS27PC010A-15FMBE101	TMS27PC010A-15FMBW101	TMS27PC010A-15FML	TMS27PC010A-15FMBW101
IC202	MSP3410-PS	MSP3410-15	MSP3400C-PS	MSP3410-15	MSP3400C-PS	MSP3410-15	MSP3400C-PS	MSP3410-15
IC303	—	TDA8395T	TDA8395T	TDA8395T	TDA8395T	—	TDA8395T	—
R13	150	—	150	150	150	150	150	150
R14	150	—	150	150	150	150	150	150
R15	150	—	150	150	150	150	150	150
R16	100	—	100	100	100	100	100	100
R17	100	—	100	100	100	100	100	100
R117	1.8K	1.8K	1.8K	1.8K	1.8K	1.8K	1.8K	2.0K
TU101	TUVIF (AEP)	TUVIF (FR)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (UK)


A (2/2) TUNER, AUDIO CONTROL VIDEO SW.
DIGTAL SIGNAL PROCESSING
Y/C JUNGLE MICRO CONTROLLER
IC303 SECAM DECODER
IC301 CXA2000Q-TL Y CHROMA JUNGLE
IC302 TBA4665T-T BASEBAND DELAY-LINE
IC3 ROM
IC2 ST24E32M6TR NVM
IC4 PST593C-MMP-4P RESET
Q304 2SC2412K BUFF
Q305 2SC2412K LEVEL SHIFT
Q300 BTC144EK SW
Q81 2SA1037K AMP
Q80 2SC2412K AMP
TRAP
CN301 7P WHT
TO C BOARD CN703
TO B BOARD CN902
CN1 50P
SDA
SCL
AUDIO SW
HREQ
RST
AFT
AGC MONI
U-PC BISABLE
CVBS
SVHS-Y
SVHS-C
R AV-1
G AV-1
B AV-1
FB AV-1
HP R
HP L
SP R
SP L
AUDIO L AV-3
AUDIO R AV-3
CVBS AV-3
Y AV-3
C AV-3
AUDIO SW
RED DRIVE
GRN DRIVE
BLUE DRIVE
+9V
GND
CUT OFF
ROTATION COIL
VERTICAL LOAD
EAST/WEST DRIVE
H DRIVE
V SYNC
H FLYBACK
VERTICAL GND
EHT
ABL
PROTECTION
BDC RELAY
STANDBY 5V
AFC
SIRCS
AUDIO L OUT SPEAKER
CHASSIS STANDBY
AUDIO R OUT SPEAKER
LUMISPONDER
STANBBY LED
FRONT KEY 1
AUDIO MUTE
AUDIO R OUT HP
AUDIO L OUT HP
AUDIO GND
AUDIO L IN AV-3
AUDIO R IN AV-3
CVBS IN AV-3
VIDEO GND
S-VHS C IN AV-3
UDZ-TE-17-9.1B



A (1/2) BOARD IC VOLTAGE TABLE

IC Voltage Table		
Ref No	Pin No	Voltage (V)
IC201	13	4.4
	15	4.4
	20	3.5
	21	2.7
	22	4.9
	23	4.4
	24	0
	25	4.4
	26	8.8
	32	4.4
IC202	4	2.8
	6-7	0.1
	8	3.0
	9	3.6
	11	4.7
	13	4.7
	20-21	2.4
	23	0.2
	25	1.5
	26	4.8
	28	3.8
	29	2.6
	39-42	3.8
	44	7.1
	45	8.0
	46	7.1
	47-48	3.8
	53-54	3.8

A (2/2) BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table			
Ref No	B Base	C Collector	E Emitter
Q1	3.7	4.8	3.1
Q4	0.1	4.8	-
Q5	0.7	4.8	4.0
Q15	-	4.3	-
Q16	4.3	0.2	-
Q17	0.4	3.5	-
Q18	3.5	0.7	-
Q80	2.6	2.2	-
Q81	2.4	-	3.0
Q304	-	4.8	-
Q305	-	4.8	-
Q330	4.5	-	5.1
Q331	6.3	8.8	5.7
Q332	3.1	8.8	2.5
Q1001	4.4	-	-

A (1/2) BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table			
Ref No	B Base	C Collector	E Emitter
Q110	1.8	8.2	1.2
Q112	1.5	8.8	0.8
Q113	1.8	-	-
Q114	5.4	6.0	-
Q120	84.3	8.8	3.7
Q121	1.5	5.4	0.9
Q122	5.4	8.8	4.7
Q124	-	8.8	-
Q201	4.4	8.8	3.7
Q202	4.4	8.8	3.7

WAVEFORMS A BOARD

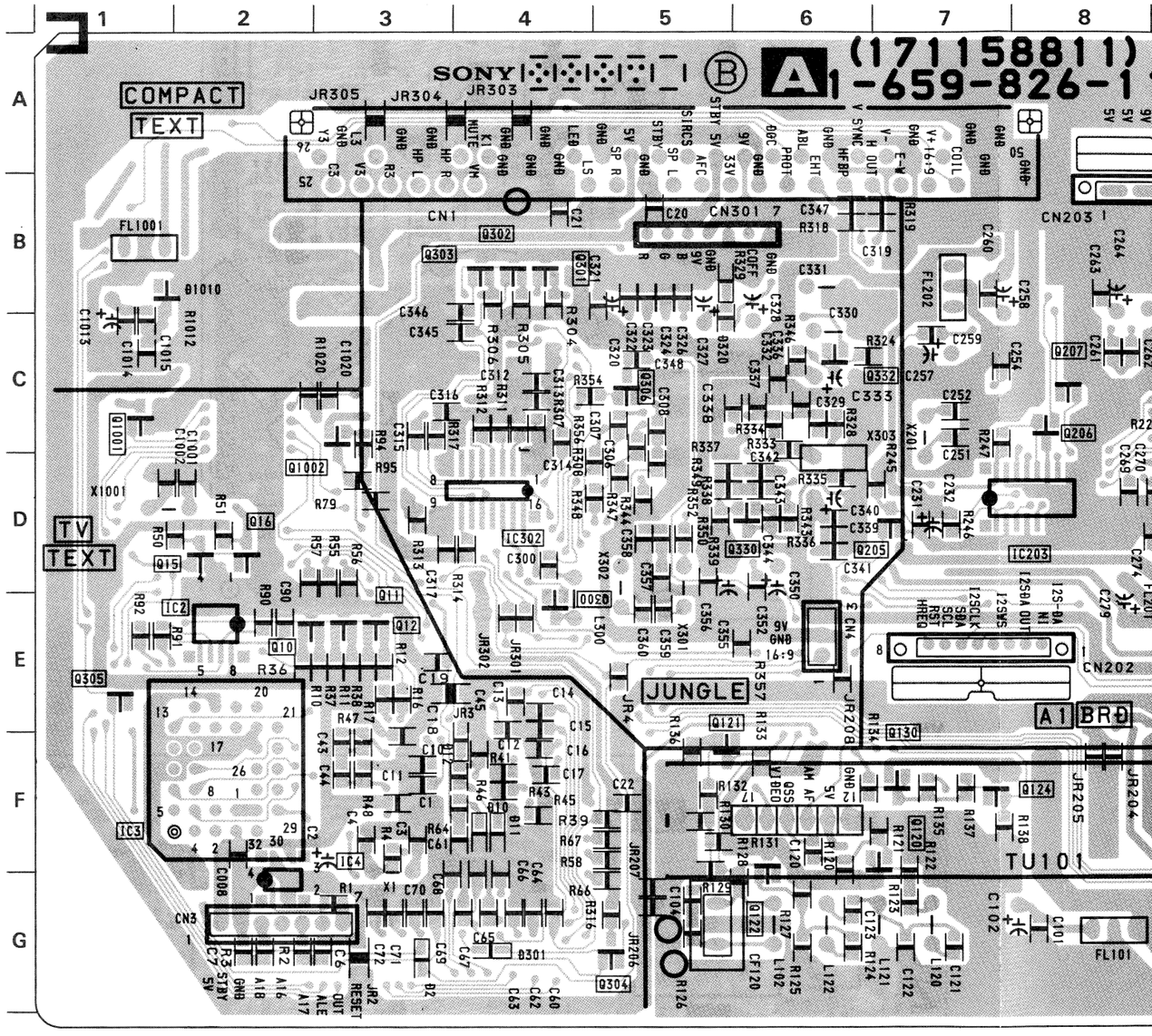
① 3.5 Vp-p (H)	② 3.0 Vp-p (H)	③ PAL.SECAM 3.0 Vp-p (H)	③ NTSC 2.3 Vp-p (H)	④ 5.1 Vp-p (H)
⑤ 1.0 Vp-p (H)	⑥ 1.4 Vp-p (H)	⑦ PAL.NTSC 0.6 Vp-p (H)	⑦ SECAM 0.5 Vp-p (H)	⑧ PAL 0.8 Vp-p (H)
⑧ SECAM 1.5 Vp-p (H)	⑧ NTSC 0.9 Vp-p (H)	⑨ PAL.SECAM 0.5 Vp-p (H)	⑨ NTSC 0.4 Vp-p (H)	⑩ 1.0 Vp-p (H)

A (2/2) BOARD IC VOLTAGE TABLE

IC Voltage Table								
Ref No	Pin No	Voltage (V)	Ref No	Pin No	Voltage (V)	Ref No	Pin No	Voltage (V)
IC1	2	3.6	IC301	5	3.6	IC301	61	5.0
	3-4	4.8		6	5.0		62	7.6
	5	0.5		7-8	5.4	IC302	1	4.8
	7	4.8		10	0.6		5	0.7
	9	4.8		12-14	5.4		9	4.8
	11	2.4		16	4.0		11-12	3.0
	13	4.8		17-19	5.4		14	1.3
	14-15	2.3		20	8.8		16	1.3
	16-17	4.8		22-23	2.2	IC303	5	8.0
	48	4.0		24	2.0		3.2	10
	51	4.8		25	2.4		11	5.6
	52-53	2.4		26	2.0		0	19
	54	0.7		27	4.0		20	3.7
	55	0.2		28	6.6		4	0.2
	56-57	4.8		29	8.8		5	0.7
	58	2.8		31-33	3.0	IC1001	4	0.2
	59	3.5		34	4.0		5	0.7
	60	2.4		35	4.6		6	1.7
	62	0.7		36	8.8		7	1.8
	63	4.4		37	3.1		10	0.4
	65	4.8		38	3.4		11-12	4.8
	66	2.1		39	5.3		16	4.8
	67	2.0		40	4.2		17	0
	69-71	2.3		41	2.3		21	4.8
	72	4.8		43	1.7		23	3.0
	73	1.5		44	8.8		25	4.8
	74	1.2		45	2.5		56	0
	75-77	4.8		46	3.9		61	1.3
	79	0.2		47	3.0		62-63	1.4
	80	4.8		48	4.4		64	0
IC2	5-8	4.8		49	6.3		66	4.6
IC3	1	4.8		50-51	0.1		67	4.7
	31-32	4.8		53	3.9		68	4.0
IC4	1	4.8		54	5.0			
	3	4.8		55-56	4.2			
IC301	1	1.5		58-59	8.8			
	3-4	5.6		60	5.3			

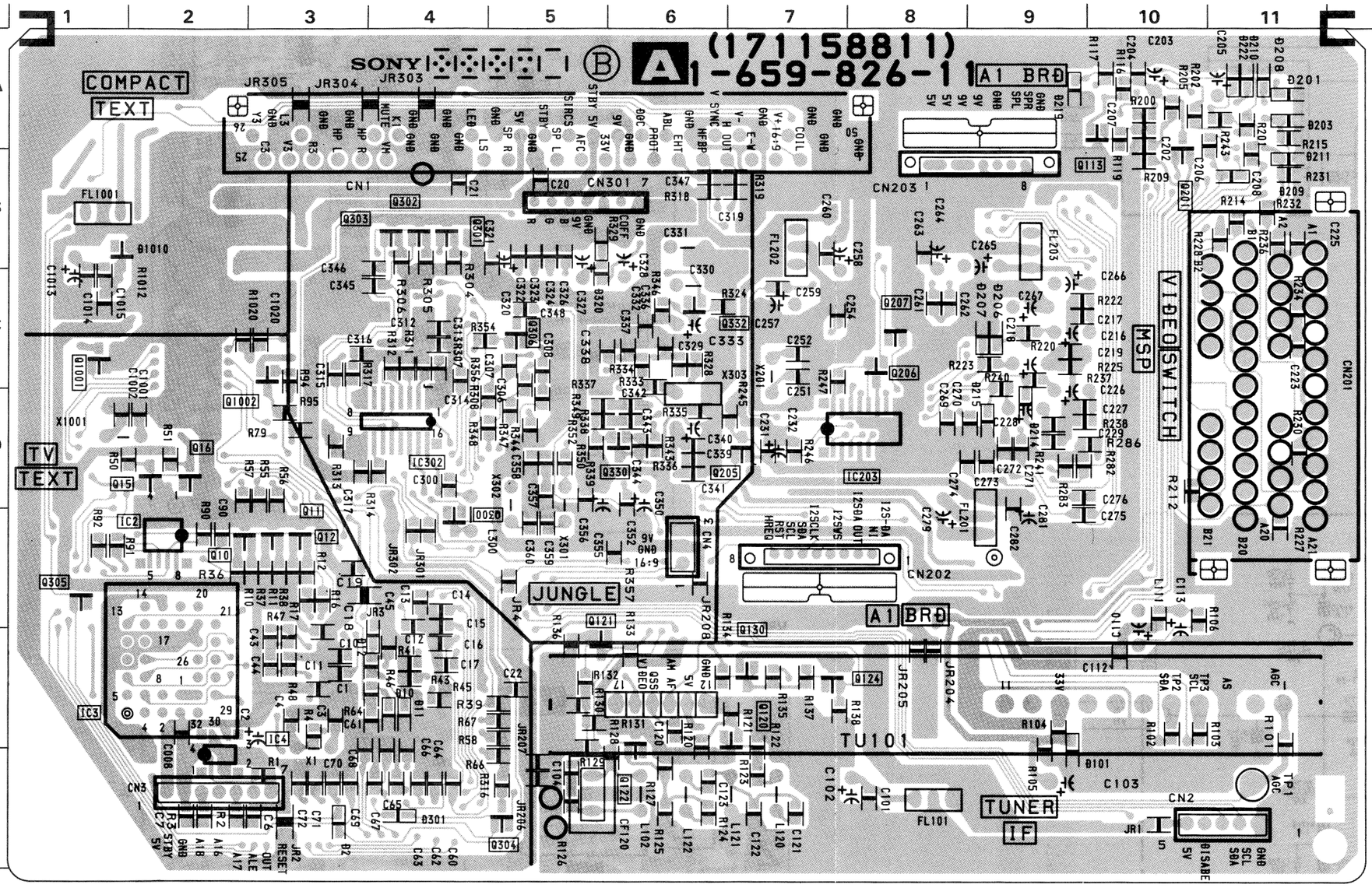
A [TUNER, AUDIO CONTROL VIDEO SW, DIGITAL SIGNAL PROCESSING Y/C JUNGLE MICRO CONTROLLER]

A Board <Conductor Side>

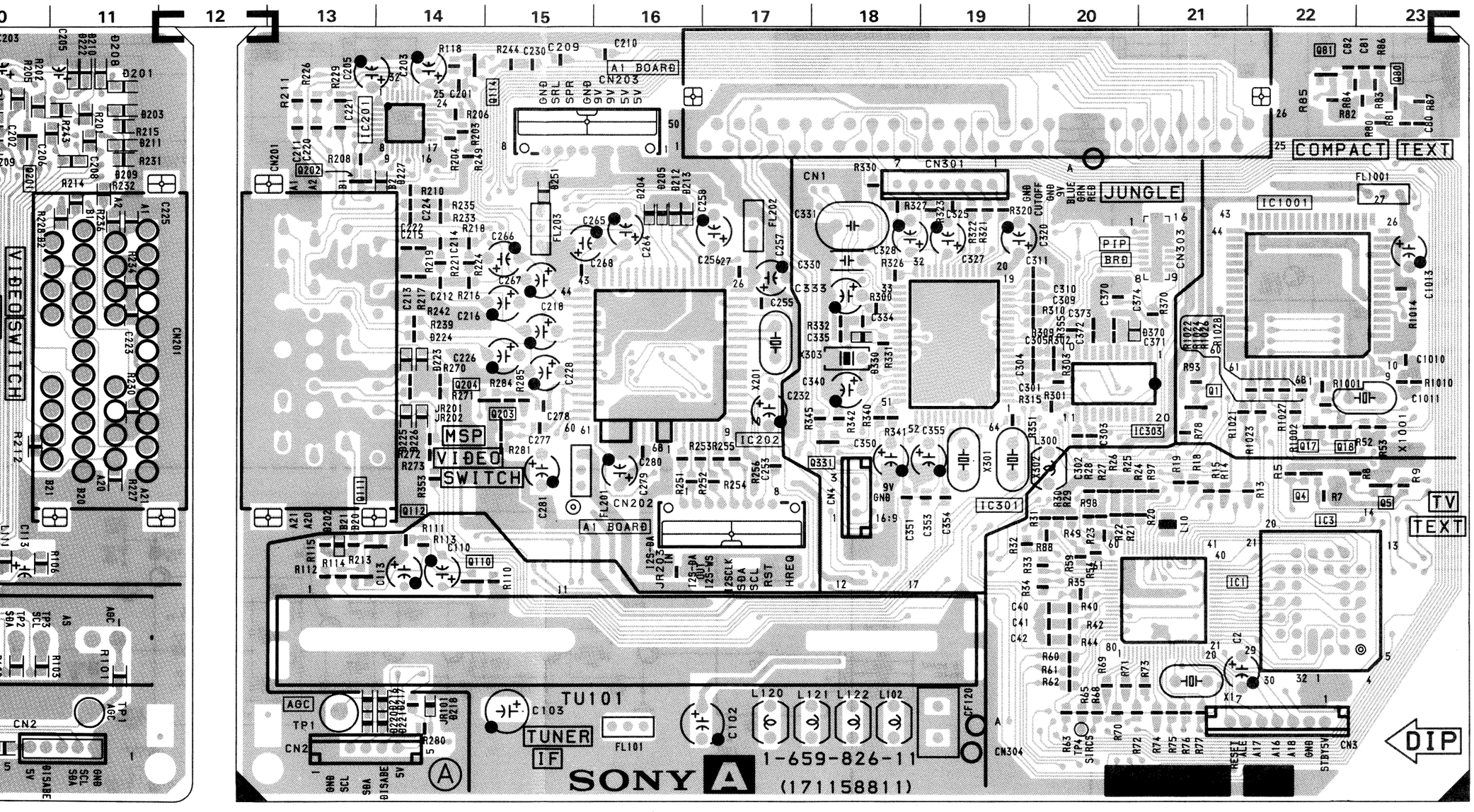


A TUNER, AUDIO CONTROL VIDEO SW, DIGITAL SIGNAL PROCESSING
Y/C JUNGLE MICRO CONTROLLER

A Board <Conductor Side>

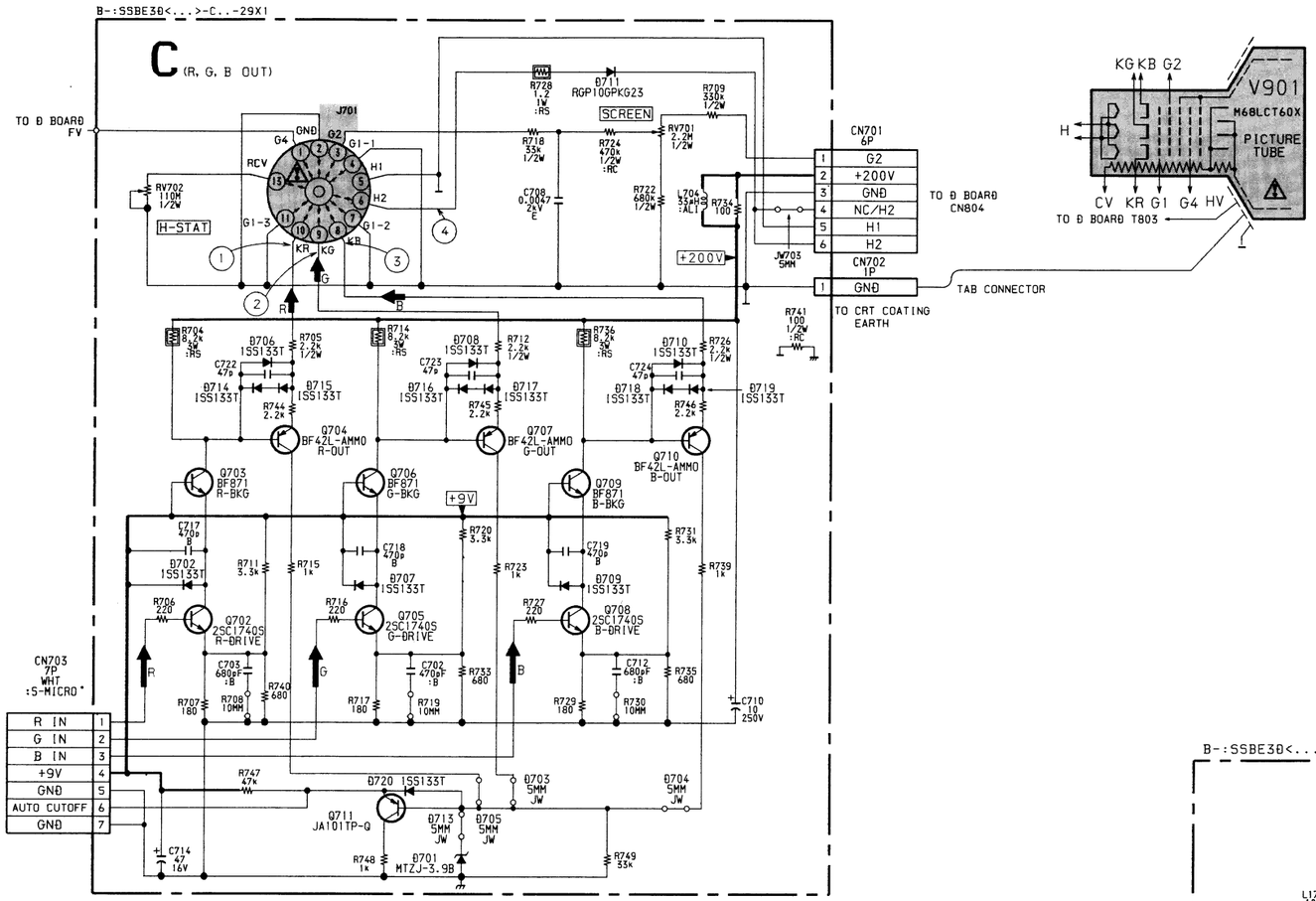


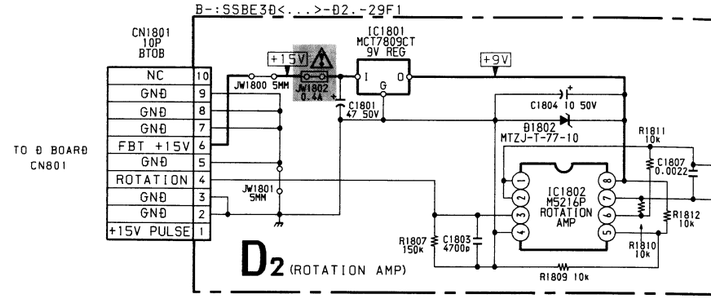
A Board <Component Side>

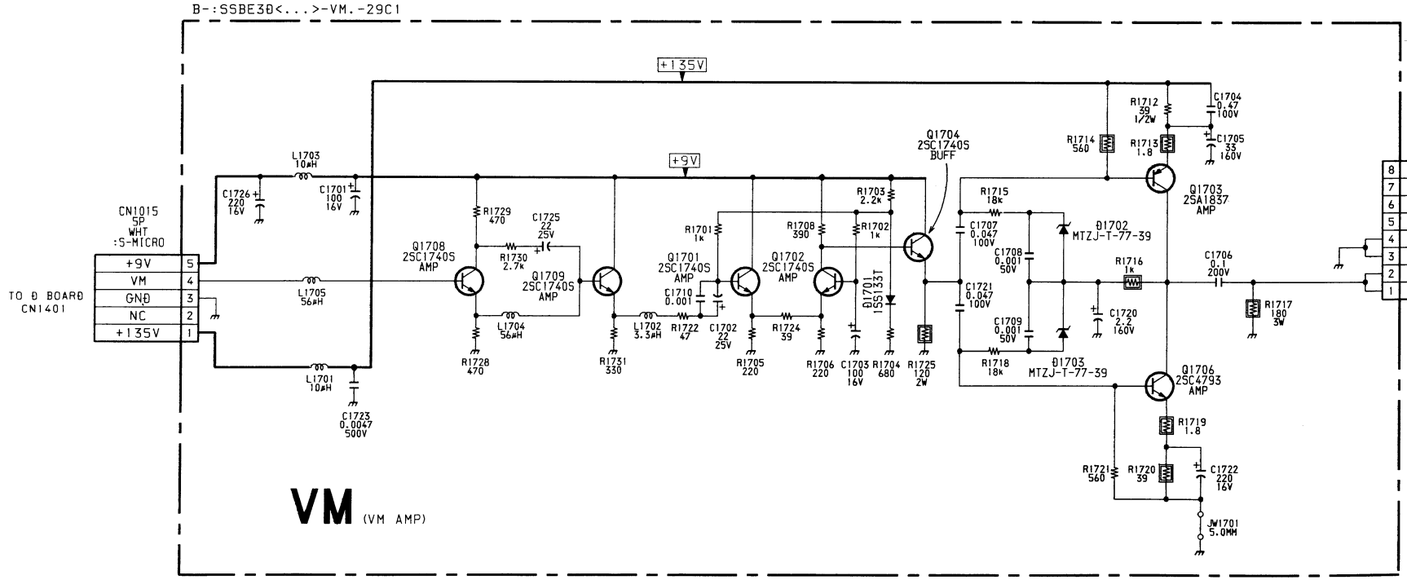


A BOARD

IC		Q305	E-1
IC1	F-21	Q306	C-5
IC2	E-2	Q330	D-6
IC3	F-2	Q331	D-18
IC4	G-2	Q332	C-6
IC201	A-14	Q1002	C-3
IC202	C-16	**DIODE**	
IC203	D-8	D2	G-3
IC301	C-19	D10	F-10
IC302	D-4	D11	F-10
IC303	D-21	D12	F-4
TRANSISTOR		D101	F-9
Q1	D-21	D201	A-11
Q4	E-22	D202	E-13
Q5	E-23	D203	A-11
Q10	E-2	D204	B-16
Q11	E-3	D205	B-16
Q15	D-2	D206	C-9
Q16	D-2	D207	C-9
Q17	D-22	D208	A-11
Q18	D-23	D209	B-11
Q80	A-23	D210	A-11
Q81	A-22	D211	B-11
Q110	F-14	D212	B-16
Q111	E-14	D213	B-16
Q112	E-14	D214	D-9
Q113	A-10	D215	D-9
Q114	A-14	D216	G-14
Q120	F-7	D217	G-14
Q121	F-5	D218	G-14
Q122	F-6	D220	G-14
Q124	F-7	D221	D-14
Q130	F-7	D222	D-14
Q201	B-10	D223	D-14
Q202	B-13	D224	D-14
Q203	D-15	D225	D-14
Q204	D-15	D226	D-14
Q205	D-7	D227	B14
Q206	C-8	D251	B-15
Q207	C-8	D320	C-5
Q300	E-4	D370	C-21
Q304	G-5		

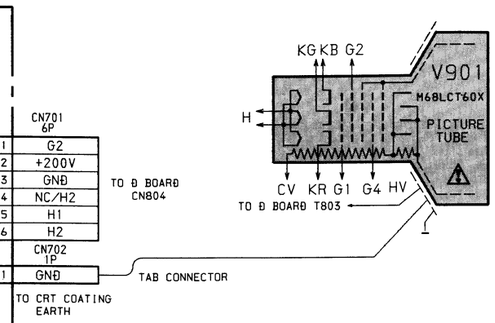


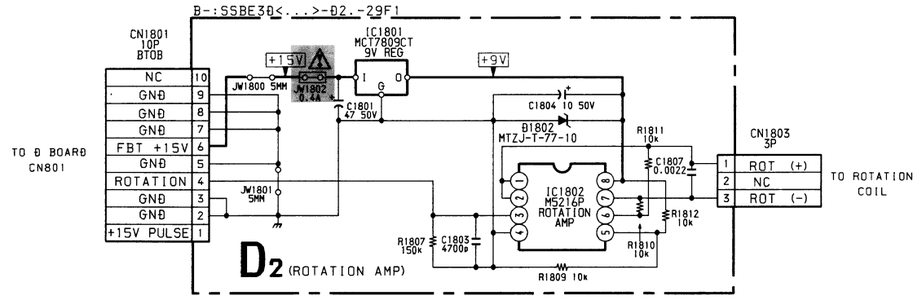


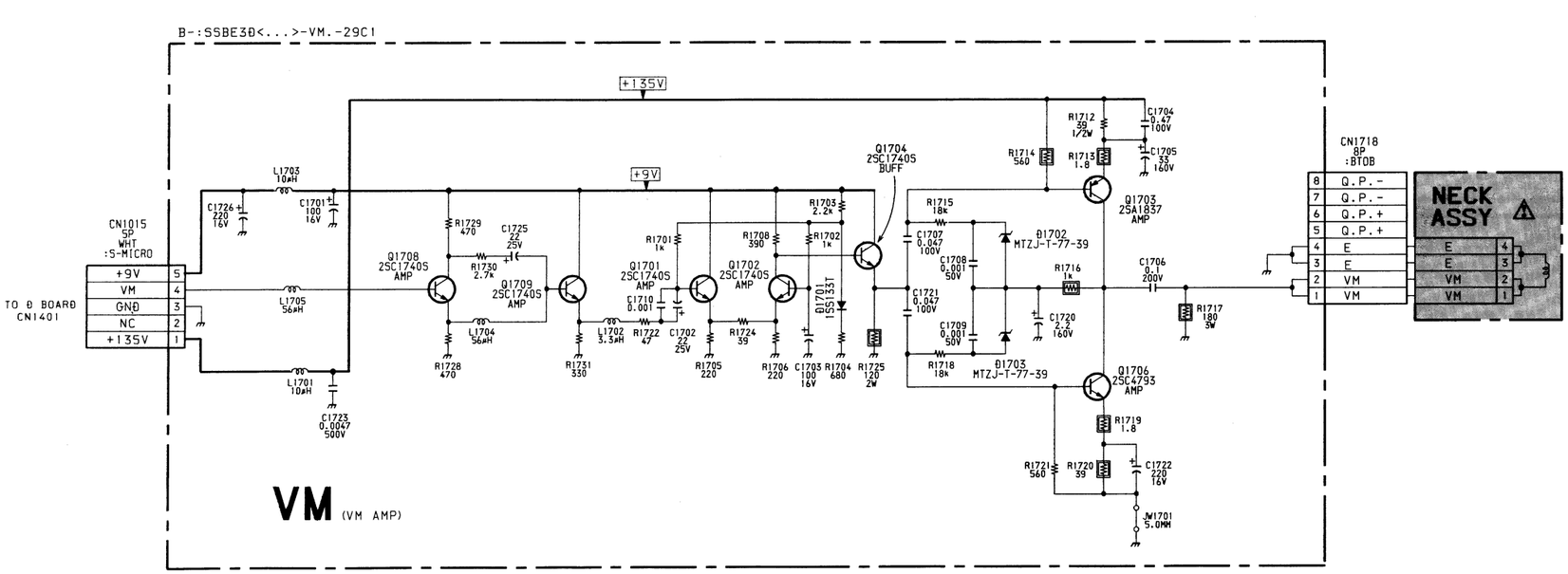


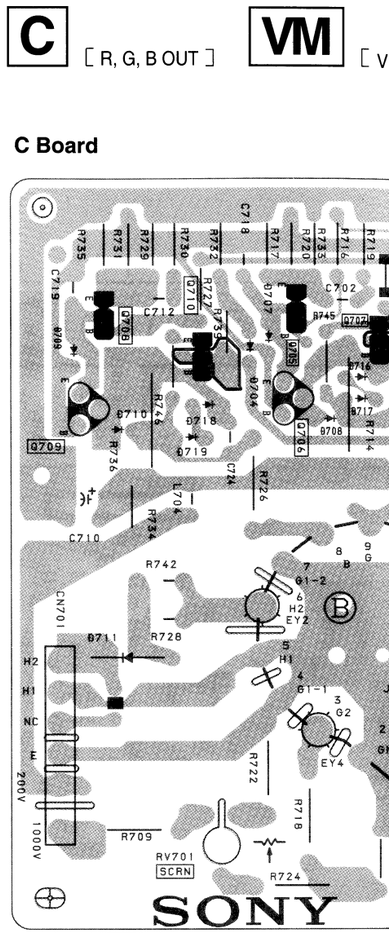
WAVEFORMS C BOARD

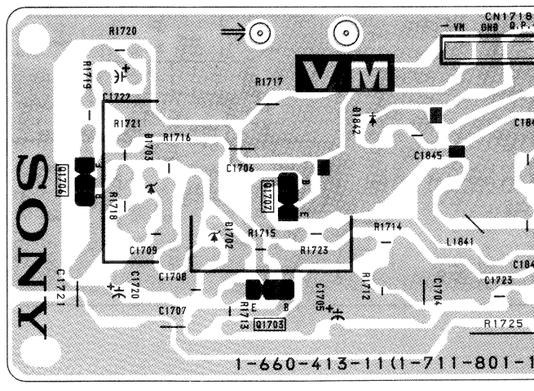
①	②	③	④
110 Vp-p (H)	108 Vp-p (H)	90 Vp-p (2H)	21 Vp-p (2H)


CN701
6P
1 G2
2 +200V
3 GNÐ
4 NC/H2
5 H1
6 H2
CN702
1P
1 GNÐ
TO Ð BOARÐ
CN804
TAB CONNECTOR
TO CRT COATING
EARTH
KG KB G2
V901
M68LCT60X
PICTURE
TUBE
H
CV KR G1 G4 HV
TO Ð BOARÐ T803


B-:SSBE3Ð<...>-Ð2.-29F1
CN1801
10P
BTOB
NC 10
GNÐ 9
GNÐ 8
GNÐ 7
FBT +15V 6
GNÐ 5
ROTATION 4
GNÐ 3
GNÐ 2
+15V PULSE 1
TO Ð BOARÐ
CN801
+15V
JW1800 5MM
JW1802 0.4A
IC1801
MCT7809CT
9V REG
C1801
47 50V
+9V
C1804 10 50V
ÐI802
MTZJ-T-77-10
R1811
10k
C1807
0.0022
IC1802
M5216P
ROTATION
AMP
R1812
10k
R1810
10k
R1809 10k
R1807
150k
C1803
4700p
JW1801
5MM
CN1803
3P
1 ROT (+)
2 NC
3 ROT (-)
TO ROTATION
COIL
D2 (ROTATION AMP)

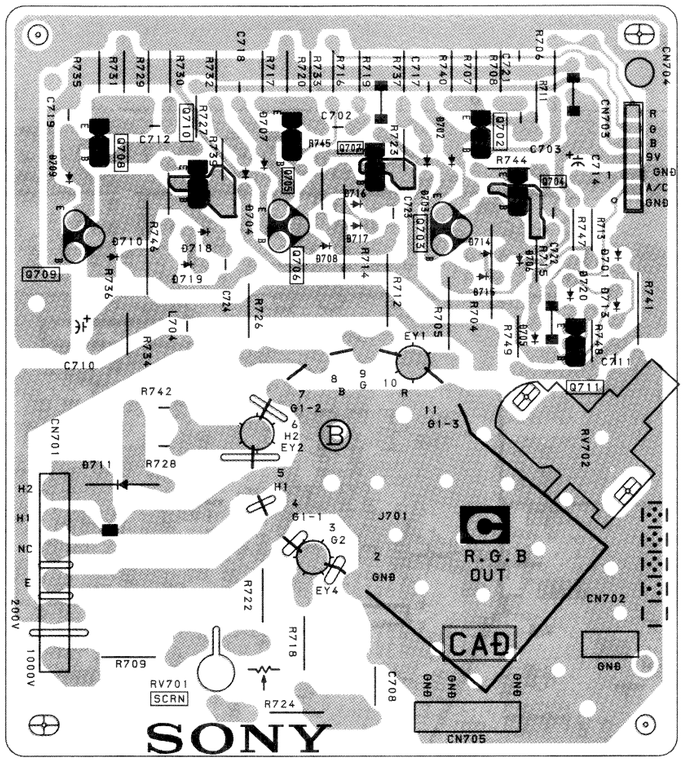

B-:SSBE3Ð<...>-VM.-29C1
+135V
+9V
CN1015
5P
WHT
:S-MICRO
+9V 5
VM 4
GNÐ 3
NC 2
+135V 1
TO Ð BOARÐ
CN1401
L1703
10µH
C1726
220
16V
C1701
100
16V
L1705
56µH
L1701
10µH
C1723
0.0047
500V
R1729
470
C1725
22
25V
R1730
2.7k
L1704
56µH
R1728
470
Q1708
2SC1740S
AMP
Q1709
2SC1740S
AMP
R1731
330
L1702
3.3µH
R1722
47
R1701
1k
Q1701
2SC1740S
AMP
C1710
0.001
C1702
22
25V
R1705
220
R1708
390
Q1702
2SC1740S
AMP
R1724
39
R1706
220
R1703
2.2k
R1702
1k
D1701
1SS133T
C1703
100
16V
R1704
680
R1725
120
2W
Q1704
2SC1740S
BUFF
R1715
18k
C1707
0.047
100V
C1708
0.001
50V
C1721
0.047
100V
C1709
0.001
50V
R1718
18k
ÐI702
MTZJ-T-77-39
ÐI703
MTZJ-T-77-39
R1716
1k
C1720
2.2
160V
C1706
0.
200V
R1717
180
5W
R1712
39
1/2W
R1713
1.8
R1714
560
C1704
0.47
100V
C1705
33
160V
Q1703
2SA1837
AMP
Q1706
2SC4793
AMP
R1719
1.8
R1721
560
R1720
39
C1722
220
16V
JW1701
5.0MM
CN1718
8P
:BTOB
8 Q.P.-
7 Q.P.-
6 Q.P.+
5 Q.P.+
4 E
3 E
2 VM
1 VM
NECK
ASSY
E 4
E 3
VM 2
VM 1
VM (VM AMP)


C [R, G, B OUT]
VM [V
C Board
C718
R735
R731
R729
R730
R732
R717
R720
R733
R716
R719
C719
C712
C702
R722
R745
Q710
Q707
Q709
Q708
Q704
Q705
Q706
Q702
Q703
Q701
Q712
Q713
Q714
Q715
Q716
Q717
Q718
Q719
R746
R736
C724
R726
C710
R724
R742
G1-2
H2
EY2
B
CN701
Q711
R728
H2
H1
NC
E
200V
100V
G1-1
G2
EY4
R722
R718
R709
RV701
SCRN
R724
SONY

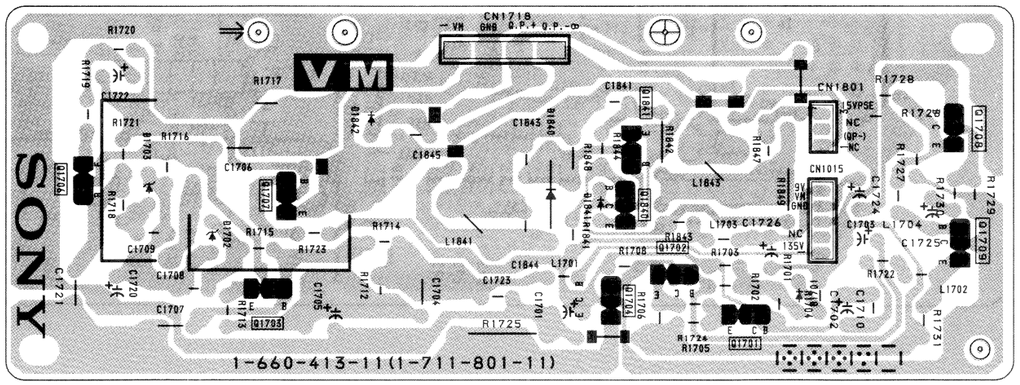

VM Board
CN1718
8P
GNÐ B.P.
VM
R1720
R1719
C1722
R1717
VM
B1842
C1845
R1721
R1716
B1703
C1706
Q1704
R1718
Q1705
R1715
R1714
R1723
L1841
C1709
C1708
C1720
C1721
C1707
R1713
Q1703
R1712
C1704
C1723
R1725
SONY
1-660-413-11(1-711-801-1

C [R, G, B OUT] VM [VM AMP]

C Board

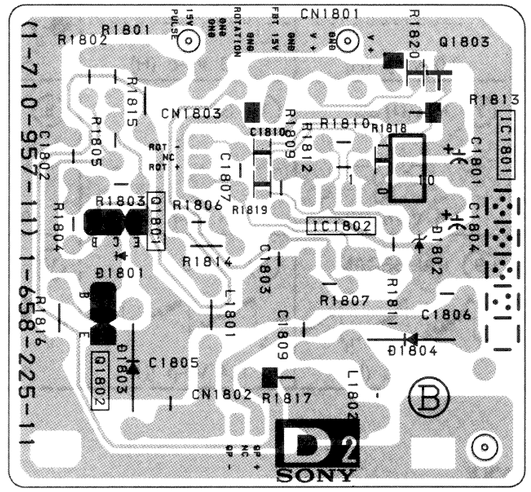


VM Board



D2 [ROTATION AMP]

D2 Board



C BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table			
Ref No	B Base	C Collector	E Emitter
Q702	2.0	11.4	1.4
Q703	12.0	168.3	11.4
Q704	168.3	6.0	163.5
Q705	1.7	11.4	1.2
Q706	12.0	178.8	11.4
Q707	178.2	6.2	173.8
Q708	2.0	11.4	1.4
Q709	12.0	168.3	11.4
Q710	168.0	6.4	160.0

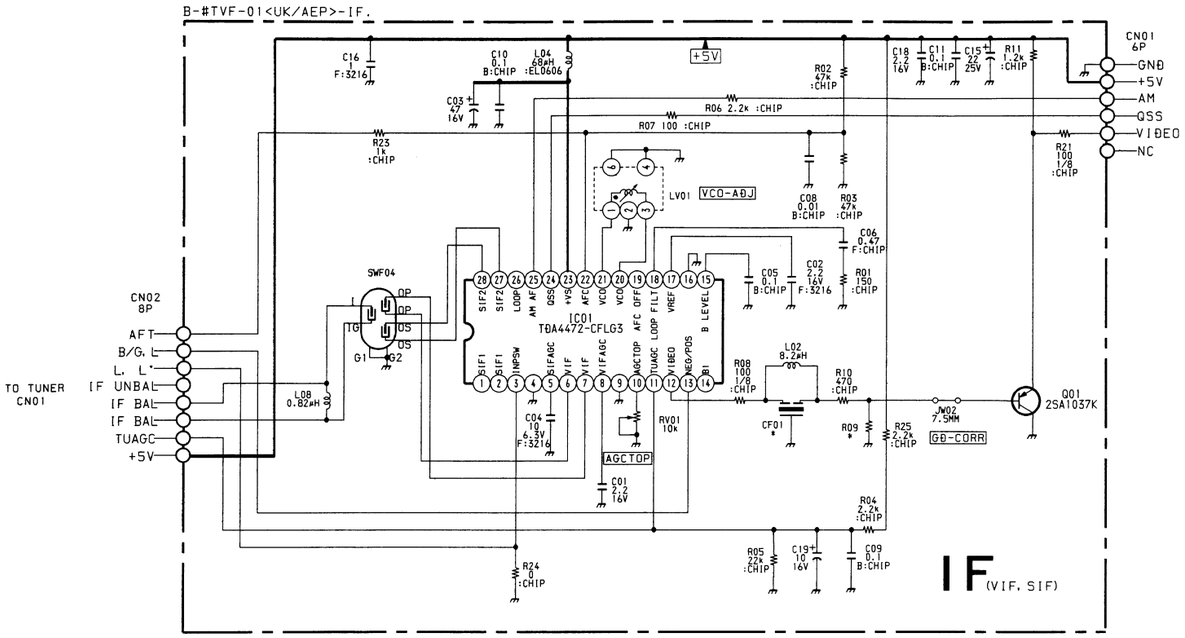
VM BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table			
Ref No	B Base	C Collector	E Emitter
Q1701	2.5	8.8	1.8
Q1702	2.5	5.5	1.8
Q1703	134.3	71.8	134.8
Q1704	5.5	8.8	4.8
Q1706	1.0	71.8	0.4
Q1707	0.7	-	-
Q1708	2.9	6.6	2.2
Q1709	2.2	8.8	1.5
Q1840	0.6	-	-

D2 BOARD IC VOLTAGE TABLE

IC Voltage Table		
Ref No	Pin No	Voltage (V)
IC1802	1-2	2.8
	3	3.0
	5-6	4.4
	7	6.2
	8	9.0

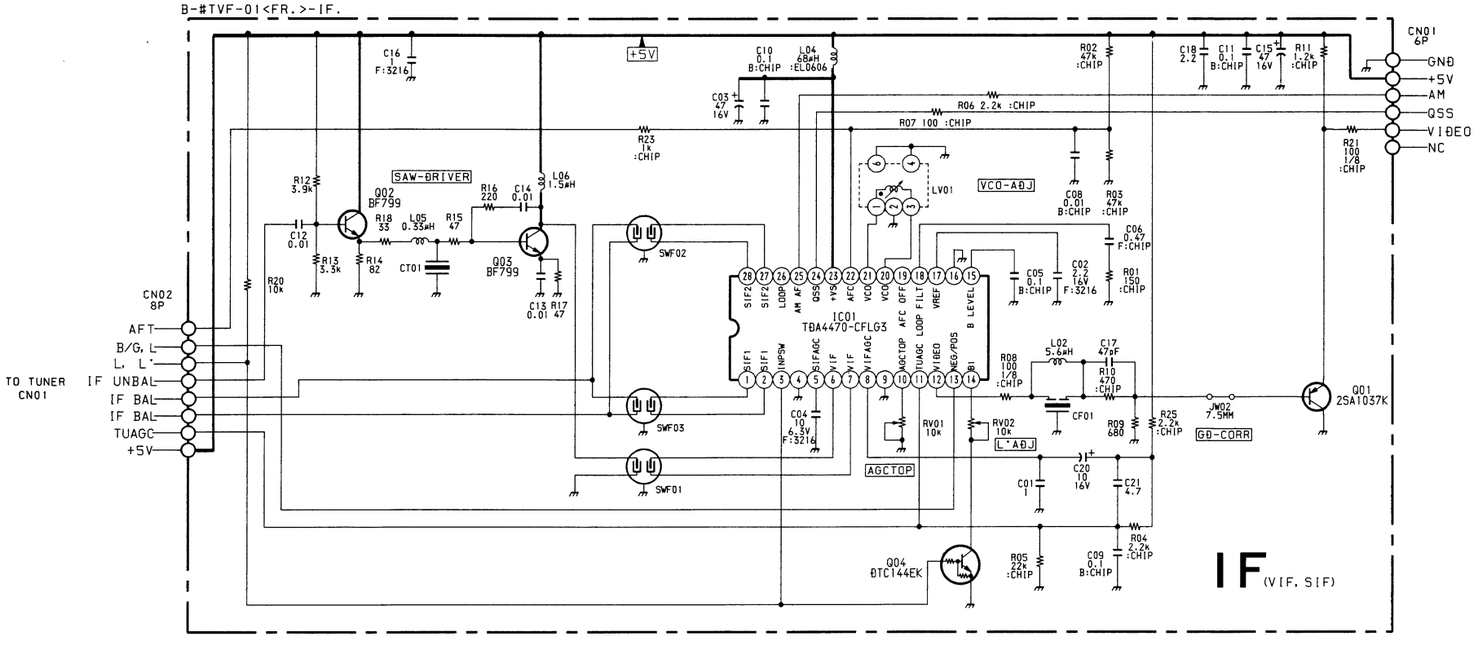
TUVIF (AEP) (KV-29X1A, 29X1D, 29X1E, 29X1K, 29X1L and 29X1R ONLY)
TUVIF (UK) (KV-29X1U ONLY)



IF Board

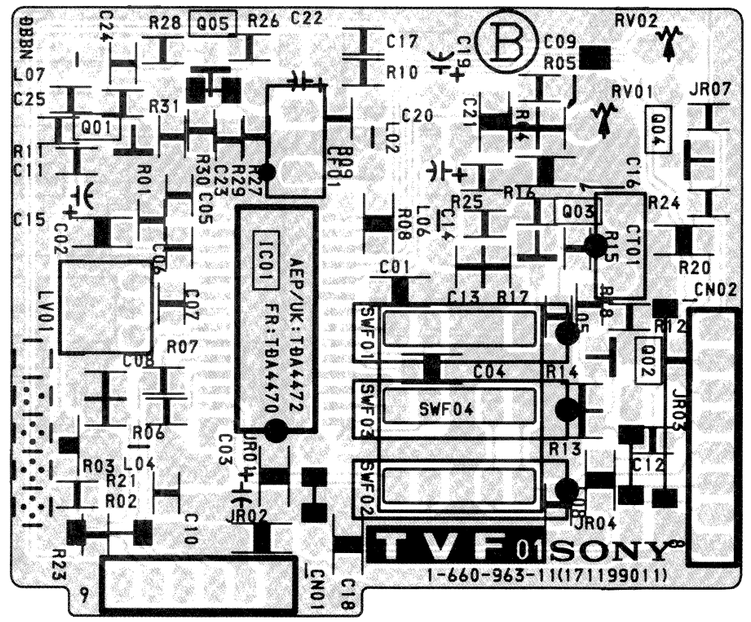
Ref. No. \ Model	29X1A	29X1D	29X1E	29X1K	29X1L	29X1R	29X1U
CF01	5.5MHz	5.5MHz	5.5MHz	5.5MHz	5.5MHz	5.5MHz	6.0MHz
R09	680MF	680MF	680MF	680MF	680MF	680MF	1K

TUVIF (FR) (KV-29X1B ONLY)

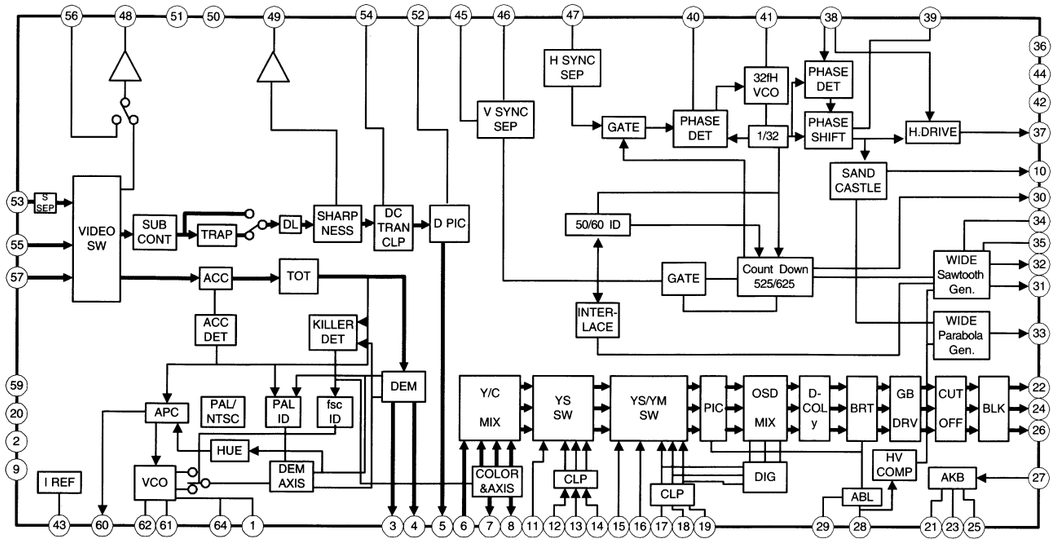


IF [VIF, SIF]

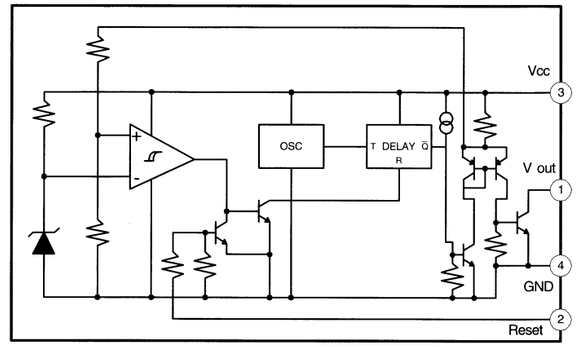
IF Board



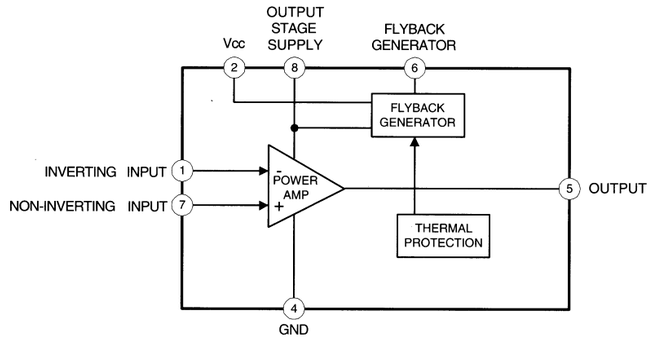
A BOARD IC301 CXA2000Q-TL



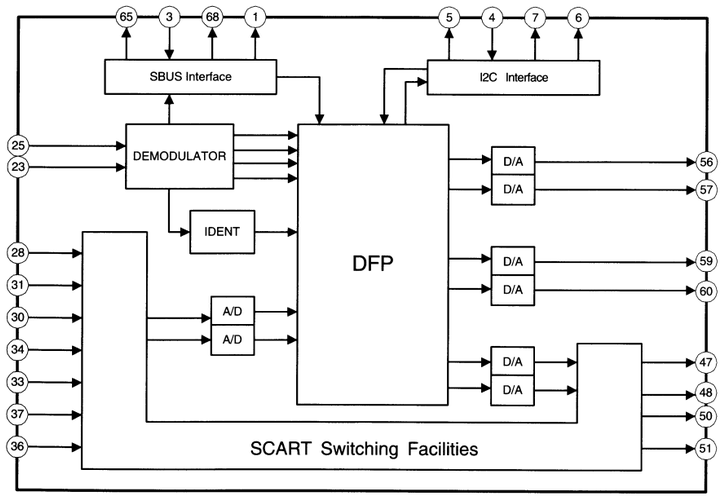
A BOARD IC4 PST593C



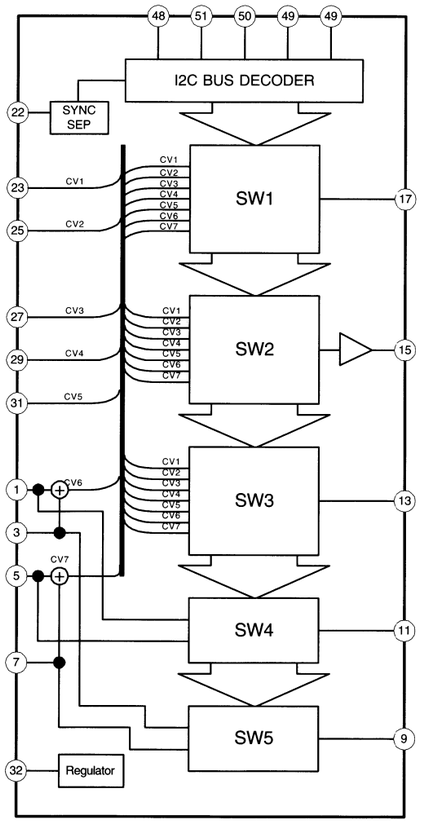
D BOARD IC500 STV9379



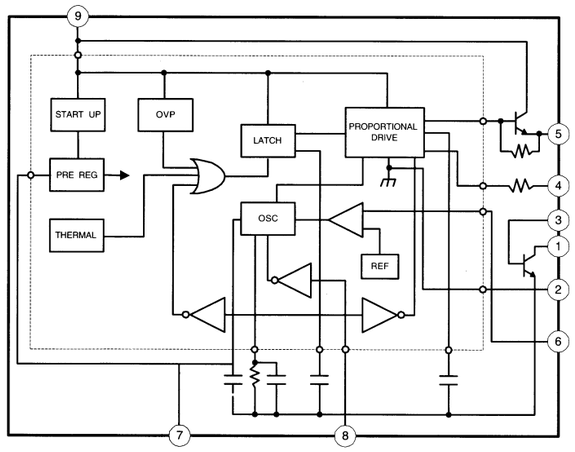
A BOARD IC202 MSP3410/MSP3400



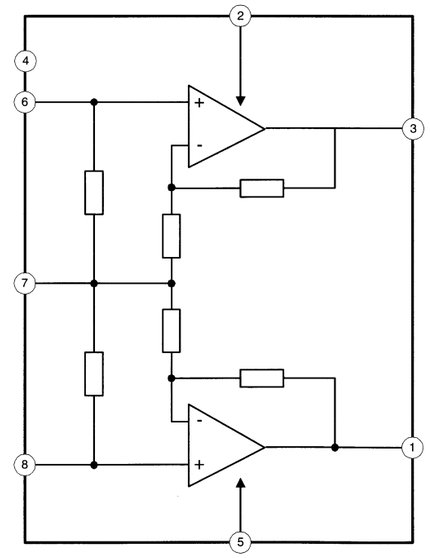
A BOARD IC201 CXA2040Q



D BOARD IC600 STR-S6708

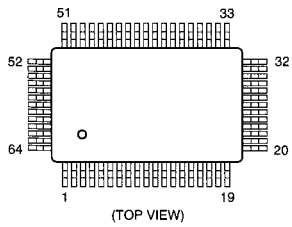


D BOARD IC1200 TDA7264



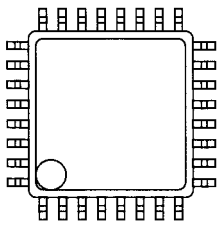
SEMICONDUCTORS

CXA2000Q-TL

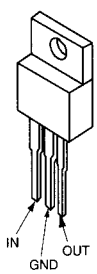


(TOP VIEW)

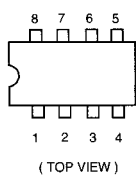
CXA2040Q-T4


(TOP VIEW)

L4941BV

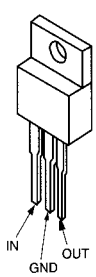


LM393P
M5216P
TDA2822M
µPC393C

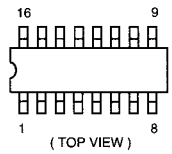


(TOP VIEW)

LM2940CT-5.0
LM2940CT
LM2940T-9.0
MCT7809CT
µPC2405HF

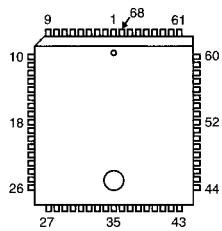


MC14052BDR2



(TOP VIEW)

MSP3400C-PS
MSP3410-15



(TOP VIEW)

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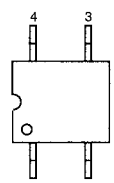

(TOP VIEW)

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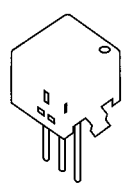
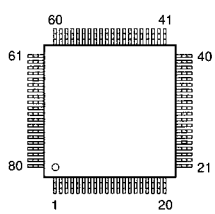


SDA5250M-GEG



(TOP VIEW)

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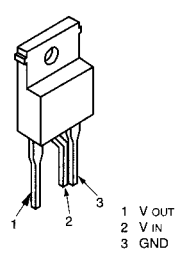

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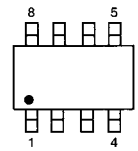

(TOP VIEW)

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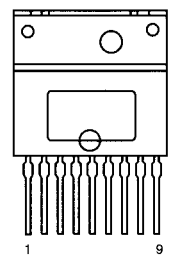

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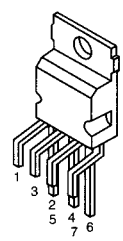

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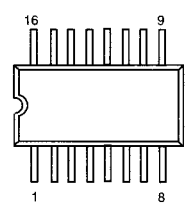

(TOP VIEW)

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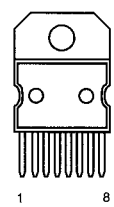

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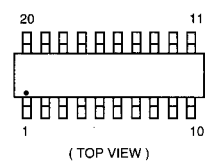

(TOP VIEW)

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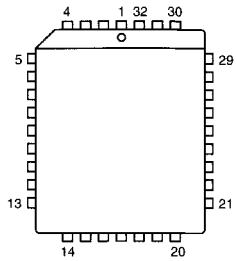

(TOP VIEW)

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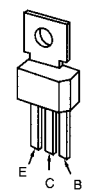

BF421L-AMMO
JA101TP-Q
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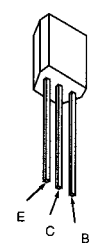
2SA933AS
2SA933S
2SA1091-O
2SC3502-F
2SC2808STP-R

DTA144ES
DTC114ES
DTC143TS
DTC144ES
2SC1740S-RT



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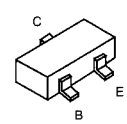
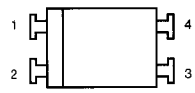
2SA1037K
2SA1162-G
2SC2412K



TLP721(D4-)



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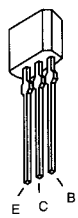

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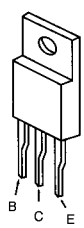

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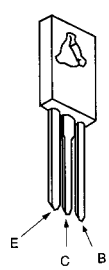

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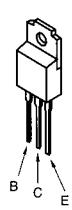

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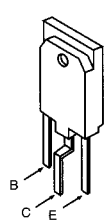
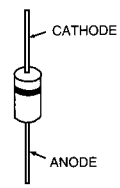
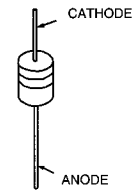


AU-01Z-V1
EG-1Z-V1
EGP20G
EL1Z
EM1-V1
EU-1-V1
EU2-V1
FML-G12S
GP08D
RGP02
RGP10GPKG23
RGP15GPKG23
RU3YX
RU4AM-T3
RU4DS



MTZJ-3.6A
MTZJ-3.9B
MTZJ-5.1B
MTZJ-5.6B
MTZJ-6.2B
MTZJ-6.8B
MTZJ-7.5C
MTZJ-9.1
MTZJ-T-77-9.1A
MTZJ-10
MTZJ-39
RD3.9ESB2
RD5.1ESB2
RD5.6ESB2
RD6.2ESB2
RD6.8ESB2
RD7.5ESB2
RD10ESB2
RD39ES-B2
1SS133T-77



BAS216
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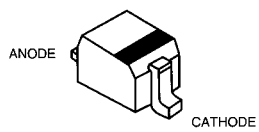
DTZ9.1
DTZ33B
MA8330
1SS355
UDZ-TE-17-5.6B
UDZ-TE-17-9.1B



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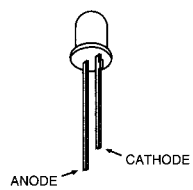

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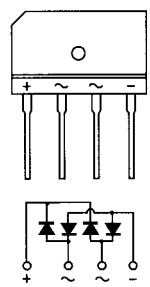

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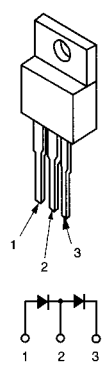


EXPLODED VIEWS

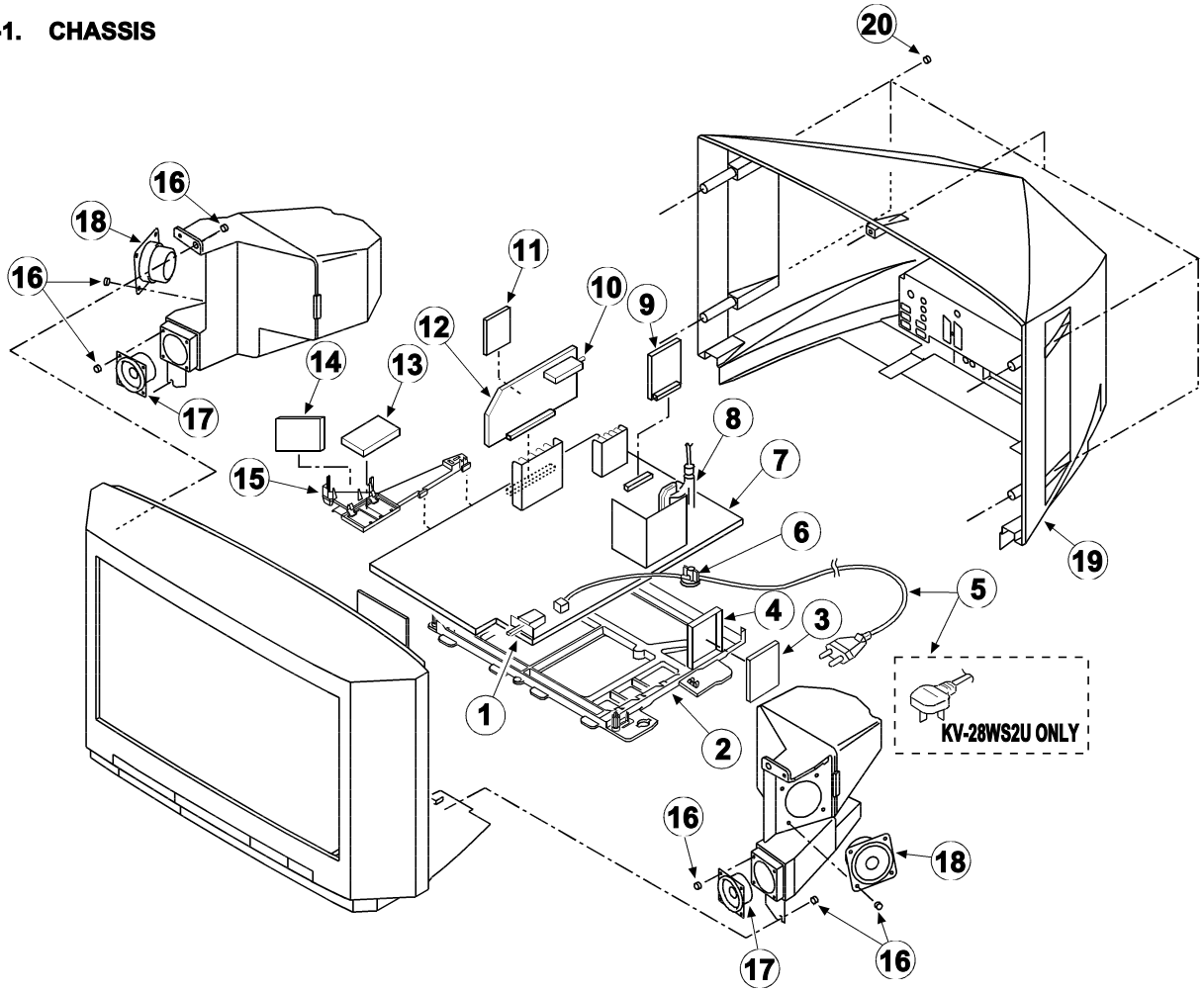
NOTE :

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

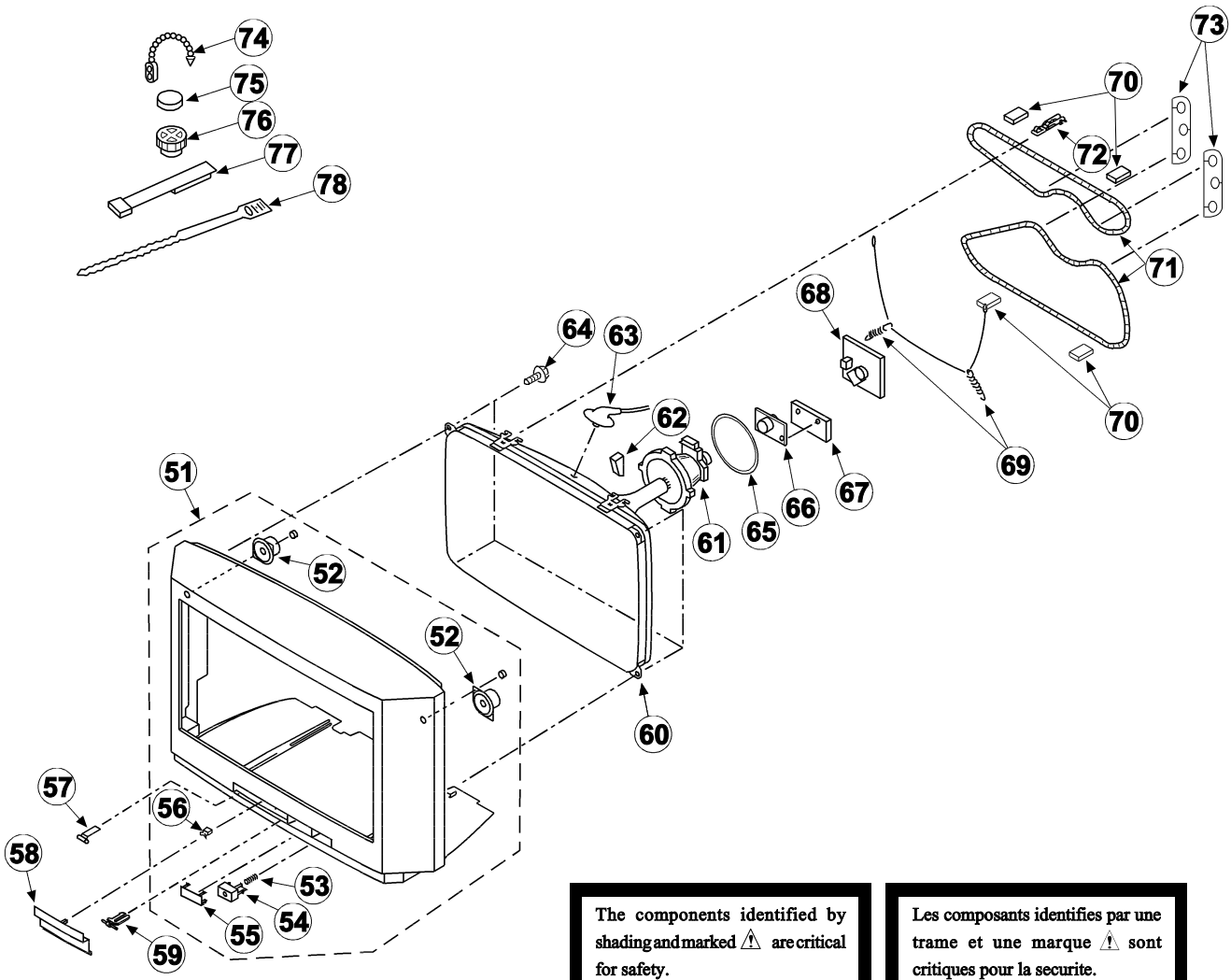
Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

6-1. CHASSIS



REF NO		PART NO	DESCRIPTION	REMARK
1	⚠	1-571-433-21	SWITCH, PUSH (AC POWER)	
2		*4-203-315-01	BRACKET, MAIN	
3		*A-1640-235-A	D3 BOARD, COMPLETE	
4		*4-203-404-01	BRACKET, D3	
5	⚠	1-751-680-11	CORD, POWER (WITH NOISE FILTER) 2.5A/250V (KV-28WS2B/28WS2D/28WS2E)	
	⚠	1-690-270-21	CORD, POWER (WITH CONNECTOR) 2.5A/250V (KV-28WS2K/28WS2R)	
	⚠	1-776-204-11	CORD, POWER (FILTER) 3.0A/250V (KV-28WS2U)	
6		*4-202-531-01	AC CORD LOCK (SC)	
7		*A-1642-190-A	D BOARD, COMPLETE	
8	⚠	1-453-169-11	TRANSFORMER ASSY, FLYBACK (UX-1604A2)	
9		*A-1640-214-A	D2 BOARD, COMPLETE	
10		1-693-340-11	TUNER/VIF (FR) (KV-28WS2B)	
		1-693-338-11	TUNER/VIF (AEP) (KV-28WS2D/28WS2E/28WS2K/28WS2R)	
		1-693-339-11	TUNER/VIF (UK) (KV-28WS2U)	
11		*A-1630-529-A	A1 BOARD, COMPLETE	
12		*A-1632-516-A	A BOARD, COMPLETE (KV-28WS2B)	
		*A-1632-471-A	A BOARD, COMPLETE (KV-28WS2D)	
		*A-1632-517-A	A BOARD, COMPLETE (KV-28WS2E)	
		*A-1632-529-A	A BOARD, COMPLETE (KV-28WS2K)	
		*A-1632-530-A	A BOARD, COMPLETE (KV-28WS2R)	
		*A-1632-515-A	A BOARD, COMPLETE (KV-28WS2U)	
13		*A-1651-088-A	J BOARD, COMPLETE	
14		*A-1649-018-A	K1 BOARD, COMPLETE	
15		*4-203-537-01	BRACKET, J-K-T	
16		4-039-355-11	SCREW(4X12), (+) BV TAPPING	
17		1-505-154-11	SPEAKER (6.5CM)	
18		1-505-155-11	SPEAKER (10CM)	
19		4-203-543-01	COVER, REAR	
20		4-039-358-01	SCREW (4X16), (+) BV TAPPING	

. PICTURE TUBE



The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF NO		PART NO	DESCRIPTION	REMARK
51		A-1603-045-A	BEZNET ASSY	52-56
52		1-504-418-21	SPEAKER (5CM)	
53		4-202-964-01	SPRING	
54		4-203-540-01	BUTTON, POWER	
55		4-203-539-01	WINDOW ORNAMENTAL	
56		4-047-464-01	CATCHER PUSH	
57		4-045-250-01	DAMPER	
58		4-203-542-01	DOOR, CONTROL	
59		4-202-555-01	SHAFT, DOOR	
60	⚠	8-737-763-05	PICTURE TUBE (SD-284T) (W66LGY011X)	
61	⚠	8-451-434-21	DEFLECTION YOKE (Y28GIA-B)	
62		3-704-495-01	SPACER, DY	
63	⚠	1-540-006-22	CAP ASSY, HIGH-VOLTAGE	
64		4-036-188-01	SCREW (M), PT	
65		1-452-724-22	COIL, NA ROTATION (RT-165)	
66	⚠	8-453-005-61	NECK ASSY PICTURE TUBE (NA297-M6)	

REF NO		PART NO	DESCRIPTION	REMARK
67		*A-1644-070-A	VM BOARD, COMPLETE	
68		*A-1638-079-A	C BOARD, COMPLETE	
69		4-369-318-31	SPRING, TENSION	
70		*4-203-390-01	CUSHION, DGC	
71	⚠	1-411-893-11	COIL DEGAUSSING	
72		4-202-463-01	CLIP, DGC (25")	
73		*4-050-252-01	SPACER, DGC	
74		4-308-870-00	CLIP, LEAD WIRE	
75		1-452-032-00	MAGNET, DISK; 10MM Ø	
76		1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
77		X-4387-214-1	PERMALLOY ASSY, CORRECTION	
78		3-701-007-00	BAND, BINDING	

ELECTRICAL PARTS LIST

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors

When indicating parts by reference number, please include the board name.

CAPACITORS MF : mF, PF : mmF

COILS MMH : mH, µH : mH

RESISTORS
- All resistors are in ohms
- F : nonflammable

A1

REF.NO.	PART NO.	DESCRIPTION		REMARK
	*A-1630-529-A	A1 BOARD, COMPLETE **********		
		< CAPACITOR >		
C1201	1-164-695-11	CERAMIC CHIP 0.0022MF	5% 50V	
C1202	1-163-038-00	CERAMIC CHIP 0.1MF	25V	
C1203	1-163-038-00	CERAMIC CHIP 0.1MF	25V	
C1204	1-163-038-00	CERAMIC CHIP 0.1MF	25V	
C1205	1-163-038-00	CERAMIC CHIP 0.1MF	25V	
C1206	1-163-038-00	CERAMIC CHIP 0.1MF	25V	
C1207	1-163-038-00	CERAMIC CHIP 0.1MF	25V	
C1208	1-163-038-00	CERAMIC CHIP 0.1MF	25V	
C1209	1-163-038-00	CERAMIC CHIP 0.1MF	25V	
C1210	1-163-038-00	CERAMIC CHIP 0.1MF	25V	
C1211	1-163-038-00	CERAMIC CHIP 0.1MF	25V	
C1212	1-126-933-11	ELECT 100MF	20% 16V	
C1215	1-126-967-11	ELECT 47MF	20% 16V	
C1216	1-163-038-00	CERAMIC CHIP 0.1MF	25V	
C1217	1-163-038-00	CERAMIC CHIP 0.1MF	25V	
C1218	1-126-964-11	ELECT 10MF	20% 50V	
C1219	1-126-967-11	ELECT 47MF	20% 16V	
C1220	1-163-145-00	CERAMIC CHIP 0.0015MF	5% 50V	
C1221	1-163-145-00	CERAMIC CHIP 0.0015MF	5% 50V	
C1222	1-163-038-00	CERAMIC CHIP 0.1MF	25V	
C1223	1-126-967-11	ELECT 47MF	20% 16V	
C1224	1-126-967-11	ELECT 47MF	20% 16V	
C1225	1-163-038-00	CERAMIC CHIP 0.1MF	25V	
C1226	1-163-038-00	CERAMIC CHIP 0.1MF	25V	
C1227	1-126-964-11	ELECT 10MF	20% 50V	
C1228	1-163-145-00	CERAMIC CHIP 0.0015MF	5% 50V	
C1229	1-163-145-00	CERAMIC CHIP 0.0015MF	5% 50V	
C1230	1-163-038-00	CERAMIC CHIP 0.1MF	25V	
C1231	1-126-967-11	ELECT 47MF	20% 16V	
C1232	1-163-038-00	CERAMIC CHIP 0.1MF	25V	
C1233	1-126-967-11	ELECT 47MF	20% 16V	
C1236	1-126-967-11	ELECT 47MF	20% 16V	
C1237	1-163-038-00	CERAMIC CHIP 0.1MF	25V	
C1238	1-163-038-00	CERAMIC CHIP 0.1MF	25V	
		< CONNECTOR >		
CN1202	1-766-929-11	CONNECTOR, BOARD TO BOARD 8P		
CN1203	1-766-929-11	CONNECTOR, BOARD TO BOARD 8P		
CN1204	*1-564-519-11	PLUG, CONNECTOR 4P		
		< DIODE >		
D1201	8-719-988-62	DIODE 1SS355		
		< IC >		
IC1201	8-759-377-62	IC DSP56004-FJ66R2		
IC1202	8-759-349-93	IC KM62256CLG-7		
IC1203	8-759-384-64	IC TDA1387T/N1/T3		
IC1204	8-759-384-64	IC TDA1387T/N1/T3		
IC1205	8-759-387-76	IC TL072CDR		
IC1206	8-759-387-76	IC TL072CDR		
IC1207	8-759-991-41	IC L78L05ACZ		
		< COIL >		
L1204	1-410-989-11	INDUCTOR CHIP 0.47UH		
L1205	1-410-989-11	INDUCTOR CHIP 0.47UH		
L1206	1-410-989-11	INDUCTOR CHIP 0.47UH		
L1207	1-410-989-11	INDUCTOR CHIP 0.47UH		
L1208	1-410-989-11	INDUCTOR CHIP 0.47UH		
L1209	1-410-989-11	INDUCTOR CHIP 0.47UH		
L1210	1-410-989-11	INDUCTOR CHIP 0.47UH		
L1211	1-410-989-11	INDUCTOR CHIP 0.47UH		
L1212	1-410-989-11	INDUCTOR CHIP 0.47UH		
L1213	1-410-989-11	INDUCTOR CHIP 0.47UH		
L1220	1-410-989-11	INDUCTOR CHIP 0.47UH		
L1221	1-410-989-11	INDUCTOR CHIP 0.47UH		
		< TRANSISTOR >		
Q1201	8-729-902-99	TRANSISTOR DTC114TK		
		< RESISTOR >		
R1202	1-216-025-00	METAL GLAZE 100	5% 1/10W	
R1204	1-216-025-00	METAL GLAZE 100	5% 1/10W	
R1205	1-216-025-00	METAL GLAZE 100	5% 1/10W	
R1206	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W	
R1207	1-216-073-00	METAL GLAZE 10K	5% 1/10W	
R1208	1-216-073-00	METAL GLAZE 10K	5% 1/10W	
R1209	1-216-073-00	METAL GLAZE 10K	5% 1/10W	
R1210	1-216-073-00	METAL GLAZE 10K	5% 1/10W	
R1211	1-216-073-00	METAL GLAZE 10K	5% 1/10W	
R1212	1-216-073-00	METAL GLAZE 10K	5% 1/10W	
R1213	1-216-073-00	METAL GLAZE 10K	5% 1/10W	
R1214	1-216-081-00	METAL GLAZE 22K	5% 1/10W	
R1215	1-216-081-00	METAL GLAZE 22K	5% 1/10W	
R1220	1-216-001-00	METAL GLAZE 10	5% 1/10W	

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R1221	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1222	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1223	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	
R1224	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1225	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1226	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1227	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	
R1228	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1229	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R1230	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	
R1231	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1232	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1233	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1234	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	
R1235	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1236	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1237	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1238	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1239	1-216-025-00	METAL GLAZE	100	5%	1/10W	

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*A-1632-516-A	A BOARD, COMPLETE (KV-28WS2B)	
	**********	
*A-1632-471-A	A BOARD, COMPLETE (KV-28WS2D)	
	**********	
*A-1632-517-A	A BOARD, COMPLETE (KV-28WS2E)	
	**********	
*A-1632-529-A	A BOARD, COMPLETE (KV-28WS2K)	
	**********	
*A-1632-530-A	A BOARD, COMPLETE (KV-28WS2R)	
	**********	
*A-1632-515-A	A BOARD, COMPLETE (KV-28WS2U)	
	**********	
1-750-797-11	SOCKET, PLCC	

< CAPACITOR >

C1	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C2	1-126-965-11	ELECT	22MF	20%	50V
C3	1-163-104-00	CERAMIC CHIP	30PF	5%	50V
C4	1-163-104-00	CERAMIC CHIP	30PF	5%	50V
C8	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C10	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C11	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C14	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C15	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C18	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C20	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C21	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C22	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C43	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C45	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C80	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C81	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C82	1-163-037-11	CERAMIC CHIP	0.022MF	10%	50V
C90	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C101	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C102	1-126-934-11	ELECT	220MF	20%	16V
C103	1-126-965-11	ELECT	22MF	20%	50V
C104	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C110	1-126-967-11	ELECT	47MF	20%	16V
C112	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C113	1-126-967-11	ELECT	47MF	20%	16V
C115	1-102-112-00	CERAMIC	330PF	10%	50V (KV-28WS2B)
C120	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C121	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C122	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C123	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C124	1-137-399-11	FILM	0.1MF	5%	50V
C201	1-163-139-00	CERAMIC CHIP	820PF	10%	50V
C202	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C203	1-126-933-11	ELECT	100MF	20%	16V
C204	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C205	1-126-965-11	ELECT	22MF	20%	50V
C206	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C207	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C208	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C209	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C210	1-216-295-00	METAL GLAZE	0	5%	1/10W
C211	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C212	1-164-346-11	CERAMIC CHIP	1MF		16V
C213	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C214	1-164-346-11	CERAMIC CHIP	1MF		16V
C215	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C216	1-126-967-11	ELECT	47MF	20%	16V
C217	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C218	1-126-967-11	ELECT	47MF	20%	16V
C219	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C220	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C221	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C222	1-164-346-11	CERAMIC CHIP	1MF		16V
C223	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C224	1-164-346-11	CERAMIC CHIP	1MF		16V
C225	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C226	1-126-967-11	ELECT	47MF	20%	16V
C227	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C228	1-126-967-11	ELECT	47MF	20%	16V
C229	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C230	1-216-295-00	METAL GLAZE	0	5%	1/10W
C231	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C232	1-126-967-11	ELECT	47MF	20%	16V
C251	1-163-087-00	CERAMIC CHIP	4PF	0.25PF	50V
C252	1-163-087-00	CERAMIC CHIP	4PF	0.25PF	50V
C253	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C254	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C255	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C256	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C257	1-126-965-11	ELECT	22MF	20%	50V
C258	1-126-964-11	ELECT	10MF	20%	50V
C259	1-164-336-11	CERAMIC CHIP	0.33MF		25V
C260	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C261	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C262	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C263	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C264	1-126-962-11	ELECT	3.3MF	20%	50V
C265	1-126-964-11	ELECT	10MF	20%	50V
C266	1-126-964-11	ELECT	10MF	20%	50V
C267	1-126-965-11	ELECT	22MF	20%	50V
C268	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C269	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C270	1-163-131-00	CERAMIC CHIP	390PF	5%	50V

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REF.NO.	PART NO.	DESCRIPTION			REMARK
C271	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C272	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C273	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C274	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C275	1-164-346-11	CERAMIC CHIP	1MF		16V
C276	1-164-346-11	CERAMIC CHIP	1MF		16V
C277	1-164-346-11	CERAMIC CHIP	1MF		16V
C278	1-164-346-11	CERAMIC CHIP	1MF		16V
C279	1-126-965-11	ELECT	22MF	20%	50V
C280	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C281	1-126-965-11	ELECT	22MF	20%	50V
C282	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C300	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C301	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C302	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C303	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C304	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C305	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C306	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C307	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C308	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C309	1-164-346-11	CERAMIC CHIP	1MF		16V
C310	1-164-346-11	CERAMIC CHIP	1MF		16V
C311	1-164-346-11	CERAMIC CHIP	1MF		16V
C312	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C313	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C315	1-216-295-00	METAL GLAZE	0	5%	1/10W
C317	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C319	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C320	1-126-965-11	ELECT	22MF	20%	50V
C321	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C322	1-163-037-11	CERAMIC CHIP	0.22MF	10%	50V
C323	1-163-037-11	CERAMIC CHIP	0.22MF	10%	50V
C324	1-163-037-11	CERAMIC CHIP	0.22MF	10%	50V
C325	1-164-346-11	CERAMIC CHIP	1MF		16V
C326	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C327	1-137-374-11	FILM	0.047MF	5%	50V
C328	1-126-964-11	ELECT	10MF	20%	50V
C329	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C330	1-130-777-00	FILM	0.1MF	5%	63V
C331	1-137-581-11	FILM	0.1MF	5%	100V
C332	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C333	1-126-933-11	ELECT	100MF	20%	16V
C334	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C335	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C336	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C337	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C338	1-164-346-11	CERAMIC CHIP	1MF		16V
C339	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C340	1-126-933-11	ELECT	100MF	20%	16V
C341	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C342	1-164-346-11	CERAMIC CHIP	1MF		16V
C343	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C344	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C347	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C348	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C350	1-126-964-11	ELECT	10MF	20%	50V
C351	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C352	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C353	1-164-505-11	CERAMIC CHIP	2.2MF		16V

REF.NO.	PART NO.	DESCRIPTION			REMARK
C354	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C355	1-126-965-11	ELECT	22MF	20%	50V
C356	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C357	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C358	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C359	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C360	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C370	1-164-505-11	CERAMIC CHIP	2.2MF		16V
		(KV-28WS2B/28WS2D/28WS2E/28WS2K/28WS2R)			
C371	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C372	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
		(KV-28WS2B/28WS2D/28WS2E/28WS2K/28WS2R)			
C373	1-164-489-11	CERAMIC CHIP	0.22MF	10%	16V
		(KV-28WS2B/28WS2D/28WS2E/28WS2K/28WS2R)			
C1001	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C1002	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C1010	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C1013	1-126-965-11	ELECT	22MF	20%	50V
C1014	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C1015	1-164-489-11	CERAMIC CHIP	0.22MF	10%	16V
C1020	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
		< FILTER >			
CF120	1-409-327-00	TRAP, CERAMIC (6.5MHz) (KV-28WS2B)			
		< CONNECTOR >			
CN1	1-695-302-11	CONNECTOR, BOARD TO BOARD 50P			
CN2	*1-568-880-51	PIN, CONNECTOR 5P			
CN4	1-568-878-51	PIN, CONNECTOR 3P			
CN201	1-766-296-11	CONNECTOR, DUAL SCART			
CN202	1-766-928-11	CONNECTOR, BOARD TO BOARD 8P			
CN203	1-766-928-11	CONNECTOR, BOARD TO BOARD 8P			
CN301	*1-568-882-51	PIN, CONNECTOR 7P			
		< DIODE >			
D2	8-719-988-62	DIODE 1SS355			
D10	8-719-158-15	DIODE RD5.6S-B			
D11	8-719-158-15	DIODE RD5.6S-B			
D12	8-719-158-15	DIODE RD5.6S-B			
D101	8-719-977-81	DIODE DTZ33B			
D201	8-719-977-22	DIODE DTZ9.1			
D202	8-719-977-22	DIODE DTZ9.1			
D203	8-719-977-22	DIODE DTZ9.1			
D204	8-719-977-22	DIODE DTZ9.1			
D205	8-719-977-22	DIODE DTZ9.1			
D206	8-719-977-22	DIODE DTZ9.1			
D207	8-719-977-22	DIODE DTZ9.1			
D208	8-719-977-22	DIODE DTZ9.1			
D209	8-719-977-22	DIODE DTZ9.1			
D210	8-719-977-22	DIODE DTZ9.1			
D211	8-719-977-22	DIODE DTZ9.1			
D212	8-719-977-22	DIODE DTZ9.1			
D213	8-719-977-22	DIODE DTZ9.1			
D214	8-719-977-22	DIODE DTZ9.1			
D215	8-719-977-22	DIODE DTZ9.1			
D216	8-719-158-15	DIODE RD5.6S-B			
D217	8-719-158-15	DIODE RD5.6S-B			
D218	8-719-158-15	DIODE RD5.6S-B			
D220	8-719-988-62	DIODE 1SS355			
D221	8-719-988-62	DIODE 1SS355			

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REF.NO.	PART NO.	DESCRIPTION	REMARK
D222	8-719-977-22	DIODE DTZ9.1	
D223	8-719-977-22	DIODE DTZ9.1	
D224	8-719-977-22	DIODE DTZ9.1	
D225	8-719-977-22	DIODE DTZ9.1	
D226	8-719-977-22	DIODE DTZ9.1	
D227	8-719-977-13	DIODE DTZ-6.8C	
D251	8-719-047-16	DIODE BAS216	
D320	8-719-977-22	DIODE DTZ9.1	
D370	8-719-047-16	DIODE BAS216	
		(KV-28WS2B/28WS2D/28WS2E/28WS2K/28WS2R)	
D1010	8-719-036-58	DIODE MA3030-H(TX)	
		< LINE FILTER >	
FL101	1-236-071-11	ENCAPSULATED COMPONENT	
FL201	1-236-071-11	ENCAPSULATED COMPONENT	
FL202	1-236-071-11	ENCAPSULATED COMPONENT	
FL203	1-236-071-11	ENCAPSULATED COMPONENT	
FL1001	1-236-071-11	ENCAPSULATED COMPONENT	
		< IC >	
IC1	8-759-376-75	IC SDA5250M-C5-GEG	
IC2	8-759-334-20	IC ST24E32M6TR	
IC3	8-759-353-82	IC TMS27PC020-15FML	
IC4	8-759-394-57	IC PST593C-MMP-4P	
IC201	8-752-076-06	IC CXA2040Q-T4	
IC202	8-759-376-80	IC MSP3410B-PS-F7-T	
		(KV-28WS2B/28WS2E/28WS2U)	
	8-759-376-56	IC MSP3400C-PS-C6-T	
		(KV-28WS2D/28WS2K/28WS2R)	
IC203	8-759-385-76	IC MC14052BDR2	
IC301	8-752-076-09	IC CXA2000Q-TL	
IC302	8-759-288-85	IC TDA4665T-T	
IC303	8-759-251-56	IC TDA8395T/N3	
		(KV-28WS2B/28WS2D/28WS2E/28WS2K/28WS2R)	
IC1001	8-759-376-76	IC SDA5273CP-GEG	
		< COIL >	
L10	1-410-379-31	INDUCTOR CHIP 6.8UH	
L102	1-408-406-00	INDUCTOR 5.6UH (KV-28WS2B)	
L111	1-410-993-11	INDUCTOR CHIP 1UH	
L120	1-408-408-00	INDUCTOR 8.2UH	
L121	1-408-397-00	INDUCTOR 1UH	
L122	1-408-408-00	INDUCTOR 8.2UH	
L300	1-408-607-31	INDUCTOR 2.2UH	
		< TRANSISTOR >	
Q1	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q4	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q15	8-729-216-22	TRANSISTOR 2SA1162-G	
Q17	8-729-216-22	TRANSISTOR 2SA1162-G	
Q80	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q81	8-729-216-22	TRANSISTOR 2SA1162-G	
Q110	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q111	8-729-216-22	TRANSISTOR 2SA1162-G	
Q112	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q113	8-729-216-22	TRANSISTOR 2SA1162-G	
Q114	8-729-216-22	TRANSISTOR 2SA1162-G	
Q120	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q121	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-28WS2B)	
Q122	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q124	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-28WS2B)	

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q130	8-729-216-22	TRANSISTOR 2SA1162-G (KV-28WS2B)	
Q201	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q202	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q205	8-729-901-01	TRANSISTOR DTC144EK	
Q206	8-729-216-22	TRANSISTOR 2SA1162-G	
Q207	8-729-216-22	TRANSISTOR 2SA1162-G	
Q300	8-729-901-01	TRANSISTOR DTC144EK	
Q304	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q305	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q306	8-729-901-01	TRANSISTOR DTC144EK	
Q330	8-729-216-22	TRANSISTOR 2SA1162-G	
Q331	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q332	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1001	8-729-901-01	TRANSISTOR DTC144EK	
Q1002	8-729-216-22	TRANSISTOR 2SA1162-G	
		< RESISTOR >	
JR101	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR201	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR204	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR205	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR206	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR207	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR304	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR305	1-216-296-91	METAL GLAZE 0 5% 1/8W	
R1	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R2	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R3	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R4	1-216-013-00	METAL GLAZE 33 5% 1/10W	
R5	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R7	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R8	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R9	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R10	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R11	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R12	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R18	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R19	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R20	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R21	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R24	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R25	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R28	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R29	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R30	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R31	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R32	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R33	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R34	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R35	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R36	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R37	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R38	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R39	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R40	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R42	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R44	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R46	1-216-095-00	METAL GLAZE 82K 5% 1/10W	
R47	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R48	1-216-121-91	METAL GLAZE 1M 5% 1/10W	

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R49	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R50	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R51	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R52	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R53	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R54	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R58	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	
R59	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R60	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R61	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R62	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R63	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R64	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R65	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R66	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R67	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R69	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R70	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R71	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R72	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R73	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R74	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R75	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R76	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R77	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R78	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R79	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R80	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R81	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R82	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R83	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R84	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R85	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R86	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R87	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R88	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R91	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R92	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R93	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R94	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R95	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R97	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R98	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R101	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R102	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R103	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R104	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R105	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R106	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R110	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R111	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R112	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R113	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R114	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R115	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R116	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R117	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
		(KV-28WS2B/28WS2D/28WS2E/28WS2K/28WS2R)				
	1-216-056-00	METAL GLAZE	2.0K	5%	1/10W	
						(KV-28WS2U)

REF.NO.	PART NO.	DESCRIPTION				REMARK
R118	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R119	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R120	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R121	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R122	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R123	1-216-031-00	METAL GLAZE	180	5%	1/10W	
R124	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R125	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R126	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R127	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R128	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R129	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R130	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R131	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R132	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R133	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R134	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R135	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R136	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R137	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R138	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R200	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R201	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R202	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R203	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R204	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R205	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R206	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R208	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R209	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R210	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R211	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R212	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R213	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R214	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R216	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R217	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R218	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R219	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R220	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R221	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R222	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R223	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R224	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R225	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R226	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R227	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R228	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R229	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R230	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R232	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R233	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R234	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R235	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R236	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R237	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R238	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R239	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R240	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R241	1-216-089-00	METAL GLAZE	47K	5%	1/10W	

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REF.NO.	PART NO.	DESCRIPTION			REMARK
R242	1-216-039-00	METAL GLAZE	390	5%	1/10W
R243	1-216-033-00	METAL GLAZE	220	5%	1/10W
R244	1-216-033-00	METAL GLAZE	220	5%	1/10W
R245	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R246	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R247	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R249	1-216-001-00	METAL GLAZE	10	5%	1/10W
R251	1-216-025-00	METAL GLAZE	100	5%	1/10W
R252	1-216-025-00	METAL GLAZE	100	5%	1/10W
R253	1-216-025-00	METAL GLAZE	100	5%	1/10W
R254	1-216-025-00	METAL GLAZE	100	5%	1/10W
R255	1-216-025-00	METAL GLAZE	100	5%	1/10W
R256	1-216-025-00	METAL GLAZE	100	5%	1/10W
R270	1-216-022-00	METAL GLAZE	75	5%	1/10W
R271	1-216-022-00	METAL GLAZE	75	5%	1/10W
R272	1-216-022-00	METAL GLAZE	75	5%	1/10W
R273	1-216-022-00	METAL GLAZE	75	5%	1/10W
R280	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R281	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R282	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R284	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R285	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R300	1-216-025-00	METAL GLAZE	100	5%	1/10W
R301	1-216-033-00	METAL GLAZE	220	5%	1/10W
R302	1-216-295-00	METAL GLAZE	0	5%	1/10W
R303	1-216-295-00	METAL GLAZE	0	5%	1/10W
R308	1-216-025-00	METAL GLAZE	100	5%	1/10W
R309	1-216-033-00	METAL GLAZE	220	5%	1/10W
R310	1-216-033-00	METAL GLAZE	220	5%	1/10W
R311	1-216-295-00	METAL GLAZE	0	5%	1/10W
R312	1-216-295-00	METAL GLAZE	0	5%	1/10W
R313	1-216-295-00	METAL GLAZE	0	5%	1/10W
R314	1-216-295-00	METAL GLAZE	0	5%	1/10W
R315	1-216-295-00	METAL GLAZE	0	5%	1/10W
R316	1-216-033-00	METAL GLAZE	220	5%	1/10W
R318	1-216-689-11	METAL GLAZE	39K	5%	1/10W
R319	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R320	1-216-025-00	METAL GLAZE	100	5%	1/10W
R321	1-216-025-00	METAL GLAZE	100	5%	1/10W
R322	1-216-025-00	METAL GLAZE	100	5%	1/10W
R323	1-216-033-00	METAL GLAZE	220	5%	1/10W
R324	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W
R326	1-216-025-00	METAL GLAZE	100	5%	1/10W
R327	1-216-025-00	METAL GLAZE	100	5%	1/10W
R328	1-216-129-00	METAL GLAZE	2.2M	5%	1/10W
R329	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R330	1-216-025-00	METAL GLAZE	100	5%	1/10W
R331	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R332	1-216-025-00	METAL GLAZE	100	5%	1/10W
R333	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R334	1-216-041-00	METAL GLAZE	470	5%	1/10W
R335	1-208-806-11	METAL CHIP	10K	0.50%	1/10W
R336	1-216-109-00	METAL GLAZE	330K	5%	1/10W
R337	1-216-025-00	METAL GLAZE	100	5%	1/10W
R338	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R339	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R340	1-216-025-00	METAL GLAZE	100	5%	1/10W
R341	1-216-025-00	METAL GLAZE	100	5%	1/10W
R342	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R343	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W

REF.NO.	PART NO.	DESCRIPTION			REMARK
R344	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R345	1-216-025-00	METAL GLAZE	100	5%	1/10W
R346	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W
R347	1-216-025-00	METAL GLAZE	100	5%	1/10W
R348	1-216-025-00	METAL GLAZE	100	5%	1/10W
R349	1-216-025-00	METAL GLAZE	100	5%	1/10W
R350	1-216-042-00	METAL GLAZE	510	5%	1/10W
R351	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R352	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R353	1-216-033-00	METAL GLAZE	220	5%	1/10W
R354	1-216-295-00	METAL GLAZE	0	5%	1/10W
R357	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R370	1-216-295-00	METAL GLAZE	0	5%	1/10W
R1001	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1002	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1010	1-216-295-00	METAL GLAZE	0	5%	1/10W
R1012	1-216-041-00	METAL GLAZE	470	5%	1/10W
R1014	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1020	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R1021	1-216-029-00	METAL GLAZE	150	5%	1/10W
R1022	1-216-029-00	METAL GLAZE	150	5%	1/10W
R1023	1-216-029-00	METAL GLAZE	150	5%	1/10W
R1024	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1026	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1027	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1028	1-216-025-00	METAL GLAZE	100	5%	1/10W

< TUNER >

TU101	1-693-338-11	TUNER/VIF (AEP) (KV-28WS2D/28WS2E/28WS2K/28WS2R)
	1-693-340-11	TUNER/VIF (FR) (KV-28WS2B)
	1-693-339-11	TUNER/VIF (UK) (KV-28WS2U)

< CRYSTAL >

X1	1-767-154-21	VIBRATOR, CERAMIC
X201	1-760-628-11	VIBRATOR, CRYSTAL 18.432MHz
X301	1-567-504-11	OSCILLATOR, CRYSTAL
X302	1-567-505-11	OSCILLATOR, CRYSTAL
X303	1-767-127-11	VIBRATOR, CERAMIC
X1001	1-579-965-21	VIBRATOR, CRYSTAL

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*A-1638-079-A	C BOARD, COMPLETE	
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< CAPACITOR >

C702	1-102-115-00	CERAMIC	560PF	10%	50V
C703	1-102-116-00	CERAMIC	680PF	10%	50V
C708	1-162-114-00	CERAMIC	0.0047MF		2KV
C710	1-107-652-11	ELECT	10MF	20%	250V
C712	1-102-116-00	CERAMIC	680PF	10%	50V
C714	1-126-967-11	ELECT	47MF	20%	16V
C717	1-102-114-00	CERAMIC	470PF	10%	50V
C718	1-102-114-00	CERAMIC	470PF	10%	50V
C719	1-102-114-00	CERAMIC	470PF	10%	50V
C722	1-101-880-00	CERAMIC	47PF	5%	50V
C723	1-101-880-00	CERAMIC	47PF	5%	50V
C724	1-101-880-00	CERAMIC	47PF	5%	50V

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C D2 D3

REF.NO.	PART NO.	DESCRIPTION				REMARK
		< CONNECTOR >				
CN701	1-778-037-11	PIN, CONNECTOR (5MM PITCH) 6P				
CN702	1-695-915-11	TAB (CONTACT)				
CN703	*1-568-882-51	PIN, CONNECTOR 7P				
		< DIODE >				
D701	8-719-109-72	DIODE RD3.9ES-B2				
D702	8-719-991-33	DIODE 1SS133T-77				
D706	8-719-991-33	DIODE 1SS133T-77				
D707	8-719-991-33	DIODE 1SS133T-77				
D708	8-719-991-33	DIODE 1SS133T-77				
D709	8-719-991-33	DIODE 1SS133T-77				
D710	8-719-991-33	DIODE 1SS133T-77				
D711	8-719-302-43	DIODE EL1Z				
D714	8-719-991-33	DIODE 1SS133T-77				
D715	8-719-991-33	DIODE 1SS133T-77				
D716	8-719-991-33	DIODE 1SS133T-77				
D717	8-719-991-33	DIODE 1SS133T-77				
D718	8-719-991-33	DIODE 1SS133T-77				
D719	8-719-991-33	DIODE 1SS133T-77				
D720	8-719-991-33	DIODE 1SS133T-77				
		< CRT SOCKET >				
J701	⚠ 1-526-990-22	SOCKET, CRT				
		< COIL >				
L704	1-408-609-41	INDUCTOR	33UH			
		< TRANSISTOR >				
Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q703	8-729-906-70	TRANSISTOR BF871-127				
Q704	8-729-200-17	TRANSISTOR 2SA1091-O				
Q705	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q706	8-729-906-70	TRANSISTOR BF871-127				
Q707	8-729-200-17	TRANSISTOR 2SA1091-O				
Q708	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q709	8-729-906-70	TRANSISTOR BF871-127				
Q710	8-729-200-17	TRANSISTOR 2SA1091-O				
Q711	8-729-026-41	TRANSISTOR 2SA933AS-QRT				
		< RESISTOR >				
R704	1-216-486-00	METAL OXIDE	8.2K	5%	3W	F
R705	1-260-103-11	CARBON	2.2K	5%	1/2W	
R706	1-247-815-91	CARBON	220	5%	1/4W	
R707	1-249-408-11	CARBON	180	5%	1/4W	
R709	1-202-844-00	SOLID	330K	10%	1/2W	
R711	1-249-423-11	CARBON	3.3K	5%	1/4W	
R712	1-260-103-11	CARBON	2.2K	5%	1/2W	
R714	1-216-486-00	METAL OXIDE	8.2K	5%	3W	F
R715	1-249-417-11	CARBON	1K	5%	1/4W	
R716	1-247-815-91	CARBON	220	5%	1/4W	
R717	1-249-408-11	CARBON	180	5%	1/4W	
R718	1-202-814-11	SOLID	33K	10%	1/2W	
R720	1-249-423-11	CARBON	3.3K	5%	1/4W	
R722	1-202-848-00	SOLID	680K	10%	1/2W	
R723	1-249-417-11	CARBON	1K	5%	1/4W	
R724	1-202-846-00	SOLID	470K	10%	1/2W	
R726	1-260-103-11	CARBON	2.2K	5%	1/2W	
R727	1-247-815-91	CARBON	220	5%	1/4W	
R728	1-216-350-11	METAL OXIDE	1.2	5%	1W	F
R729	1-249-408-11	CARBON	180	5%	1/4W	
R731	1-249-423-11	CARBON	3.3K	5%	1/4W	
R733	1-249-415-11	CARBON	680	5%	1/4W	
R734	1-247-807-31	CARBON	100	5%	1/4W	
R735	1-249-415-11	CARBON	680	5%	1/4W	
R736	1-216-486-00	METAL OXIDE	8.2K	5%	3W	F
R739	1-249-417-11	CARBON	1K	5%	1/4W	
R740	1-249-415-11	CARBON	680	5%	1/4W	
R741	1-202-549-00	SOLID	100	20%	1/2W	
R744	1-249-421-11	CARBON	2.2K	5%	1/4W	
R745	1-249-421-11	CARBON	2.2K	5%	1/4W	
R746	1-249-421-11	CARBON	2.2K	5%	1/4W	
R747	1-249-437-11	CARBON	47K	5%	1/4W	
R748	1-249-417-11	CARBON	1K	5%	1/4W	
R749	1-249-435-11	CARBON	33K	5%	1/4W	
		< VARIABLE RESISTOR >				
RV701	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M				
RV702	1-241-656-21	RES, ADJ, METAL FILM 110M				
**********						
	*A-1640-214-A	D2 BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C1801	1-126-967-11	ELECT	47MF	20%	50V	
C1803	1-137-368-11	FILM	0.0047MF	5%	50V	
C1804	1-126-964-11	ELECT	10MF	20%	50V	
C1807	1-137-366-11	FILM	0.0022MF	5%	50V	
		< CONNECTOR >				
CN1801	1-573-299-21	CONNECTOR, BOARD TO BOARD 10P				
CN1803	*1-568-878-51	PIN, CONNECTOR 3P				
		< DIODE >				
D1802	8-719-110-17	DIODE RD10ESB2				
		< IC >				
IC1801	8-759-701-59	IC NJM78M09FA				
IC1802	8-759-603-37	IC M5216P				
		< LINK IC >				
JW1802	⚠ 1-532-605-91	LINK, IC 0.4A (ICP-F10)				
		< RESISTOR >				
R1807	1-247-883-00	CARBON	150K	5%	1/4W	
R1809	1-249-429-11	CARBON	10K	5%	1/4W	
R1810	1-249-429-11	CARBON	10K	5%	1/4W	
R1811	1-249-429-11	CARBON	10K	5%	1/4W	
R1812	1-249-429-11	CARBON	10K	5%	1/4W	
**********						
	*A-1640-235-A	D3 BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C2802	1-126-965-11	ELECT	22MF	20%	50V	

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D3 D

REF.NO.	PART NO.	DESCRIPTION			REMARK
		< CONNECTOR >			
CN2801	1-568-878-51	PIN, CONNECTOR 3P			
CN2802	*1-580-798-11	CONNECTOR PIN (DY) 6P			
CN2803	*1-580-798-11	CONNECTOR PIN (DY) 6P			
		< DIODE >			
D2801	8-719-991-33	DIODE 1SS133T-77			
		< TRANSISTOR >			
Q2801	8-729-119-78	TRANSISTOR 2SC2785-HFE			
		< RESISTOR >			
R2801	1-249-421-11	CARBON 2.2K	5%	1/4W	
		< RELAY >			
RY2801	1-755-068-11	RELAY			
		< COIL >			
T2801	1-411-981-11	COIL, CHOKE 245UH			
**********					
	*A-1642-190-A	D BOARD, COMPLETE			
		**********			
	4-201-023-01	SPACER, INSULATING			
	4-202-373-01	SPRING, IC			
		< CAPACITOR >			
C502	1-102-824-00	CERAMIC	470PF	5%	50V
C503	1-136-165-00	FILM	0.1MF	5%	50V
C504	1-102-824-00	CERAMIC	470PF	5%	50V
C506	1-126-941-11	ELECT	470MF	20%	25V
C507	1-109-953-11	ELECT	2.2MF	20%	50V
C509	1-136-165-00	FILM	0.1MF	5%	50V
C510	1-126-969-11	ELECT	220MF	20%	50V
C511	1-136-202-11	FILM	0.33MF	5%	63V
C513	1-106-220-00	MYLAR	0.1MF	10%	100V
C514	1-136-165-00	FILM	0.1MF	5%	50V
C515	1-126-941-11	ELECT	470MF	20%	25V
C517	1-126-941-11	ELECT	470MF	20%	25V
C518	1-102-228-00	CERAMIC	470PF	10%	500V
C519	1-102-228-00	CERAMIC	470PF	10%	500V
C520	1-126-941-11	ELECT	470MF	20%	25V
C521	1-107-698-11	ELECT	10MF	20%	25V
C522	1-126-964-11	ELECT	10MF	20%	50V
C523	1-136-165-00	FILM	0.1MF	5%	50V
C600 ⚠	1-113-890-51	ELECT	0.0022MF	20%	250V
C601 ⚠	1-161-964-91	CERAMIC	0.0047MF		250V
C602 ⚠	1-161-964-91	CERAMIC	0.0047MF		250V
C603	1-125-555-11	ELECT	330MF	20%	400V
C604	1-126-968-11	ELECT	100MF	20%	50V
C605	1-107-929-11	ELECT	10MF	20%	100V
C606	1-162-318-11	CERAMIC	0.001MF	10%	500V
C607	1-104-666-11	ELECT	220MF	20%	25V
C608	1-109-880-11	FILM	0.0015MF	3%	2KV
C611	1-102-228-00	CERAMIC	470PF	10%	500V
C612	1-111-160-91	ELECT	22MF	20%	100V
C613	1-124-347-00	ELECT	100MF	20%	160V
C614	1-128-526-11	ELECT	100MF	20%	25V
C615	1-111-067-11	ELECT	0.001MF	20%	25V
C616	1-111-067-11	ELECT	0.001MF	20%	25V
C617	1-128-339-51	ELECT	2200MF	20%	16V
C618	1-136-165-00	FILM	0.1MF	5%	50V
C619	1-102-228-00	CERAMIC	470PF	10%	500V
C620	1-102-228-00	CERAMIC	470PF	10%	500V
C621	1-136-165-00	FILM	0.1MF	5%	50V
C622	1-107-925-11	ELECT	1.0MF	20%	100V
C623	1-104-666-11	ELECT	220MF	20%	25V
C624	1-136-165-00	FILM	0.1MF	5%	50V
C625	1-126-967-11	ELECT	47MF	20%	50V
C626	1-104-666-11	ELECT	220MF	20%	25V
C628	1-126-964-11	ELECT	10MF	20%	50V
C629	1-111-097-11	ELECT	2200MF	20%	35V
C630	1-111-097-11	ELECT	2200MF	20%	35V
C631	1-126-965-11	ELECT	22MF	20%	50V
C632	1-104-666-11	ELECT	220MF	20%	25V
C633 ⚠	1-107-563-12	FILM	0.1MF	20%	300V
C634 ⚠	1-107-563-12	FILM	0.1MF	20%	300V
C635 ⚠	1-107-563-12	FILM	0.1MF	20%	300V
C636 ⚠	1-113-890-51	ELECT	0.0022MF	20%	250V
C638	1-136-203-11	FILM	0.01MF	10%	630V
C640	1-106-220-00	MYLAR	0.1MF	10%	100V
C644	1-137-043-11	FILM	0.0047MF	10%	400V
C647	1-162-116-00	CERAMIC	680PF	10%	2KV
C651	1-102-228-00	CERAMIC	470PF	10%	500V
C800	1-137-368-11	FILM	0.0047MF	5%	50V
C801	1-137-368-11	FILM	0.0047MF	5%	50V
C802	1-102-074-00	FILM	0.001MF	10%	50V
C804	1-136-165-00	FILM	0.1MF	5%	50V
C805	1-136-207-11	FILM	0.047MF	10%	250V
C806	1-104-999-11	MYLAR	0.1MF	10%	200V
C807	1-136-109-00	FILM	0.68MF	5%	200V
C808	1-136-104-00	FILM	0.16MF	5%	200V
C810	1-107-683-11	ELECT	2.2MF	0	250V
C811	1-102-212-00	CERAMIC	820PF	10%	500V
C812	1-136-540-11	FILM	0.82MF	5%	200V
C813	1-129-722-00	FILM	0.047MF	10%	630V
C814	1-136-084-00	FILM	0.0145MF	3%	2KV
C815	1-137-047-11	FILM	0.01MF	10%	400V
C816	1-162-134-11	CERAMIC	470PF	10%	2KV
C817	1-162-116-00	CERAMIC	680PF	10%	2KV
C818	1-162-134-11	CERAMIC	470PF	10%	2KV
C819	1-136-208-11	FILM	0.068MF	10%	250V
C820	1-102-114-00	CERAMIC	470PF	10%	50V
C821	1-162-114-00	CERAMIC	0.0047MF		2KV
C822	1-107-662-11	ELECT	22MF	20%	250V
C824	1-123-024-21	ELECT	33MF		160V
C829	1-124-902-00	ELECT	0.47MF	20%	50V
C830	1-124-902-00	ELECT	0.47MF	20%	50V
C832	1-124-903-11	ELECT	1MF	20%	50V
C834	1-128-551-11	ELECT	22MF	20%	25V
C835	1-162-318-11	CERAMIC	0.001MF	10%	500V
C836	1-162-117-00	CERAMIC	100PF	10%	500V
C837	1-102-978-00	CERAMIC	220PF	5%	50V
C838	1-102-228-00	CERAMIC	470PF	10%	500V
C839	1-136-207-11	FILM	0.047MF	10%	250V
C845	1-101-880-00	CERAMIC	47PF	5%	50V
C901	1-101-810-00	CERAMIC	100PF	5%	500V

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REF.NO.	PART NO.	DESCRIPTION				REMARK
C902	1-137-372-11	FILM	0.022MF	5%	50V	
C903	1-137-372-11	FILM	0.022MF	5%	50V	
C904	1-104-665-11	ELECT	100MF	20%	25V	
C905	1-126-964-11	ELECT	10MF	20%	50V	
C906	1-126-964-11	ELECT	10MF	20%	50V	
C907	1-126-964-11	ELECT	10MF	20%	50V	
C908	1-126-964-11	ELECT	10MF	20%	50V	
C911	1-126-964-11	ELECT	10MF	20%	50V	
C913	1-101-810-00	CERAMIC	100PF	5%	500V	
C914	1-101-004-00	CERAMIC	0.01MF		50V	
C915	1-136-166-00	FILM	0.12MF	5%	50V	
C1200	1-136-165-00	FILM	0.1MF	5%	50V	
C1201	1-136-173-00	FILM	0.47MF	5%	50V	
C1202	1-136-173-00	FILM	0.47MF	5%	50V	
C1203	1-136-169-00	FILM	0.22MF	5%	50V	
C1204	1-136-169-00	FILM	0.22MF	5%	50V	
C1205	1-101-005-00	CERAMIC	0.022MF		50V	
C1206	1-101-005-00	CERAMIC	0.022MF		50V	
C1207	1-126-933-11	ELECT	100MF	20%	16V	
C1208	1-126-963-11	ELECT	4.7MF	20%	50V	
C1209	1-126-963-11	ELECT	4.7MF	20%	50V	
C1212	1-162-318-11	CERAMIC	0.001MF	10%	500V	
C1213	1-162-318-11	CERAMIC	0.001MF	10%	500V	
C1214	1-126-933-11	ELECT	100MF	20%	16V	
C1215	1-136-173-00	FILM	0.47MF	5%	50V	
C1216	1-137-366-11	FILM	0.0022MF	5%	50V	
C1217	1-137-366-11	FILM	0.0022MF	5%	50V	
C1218	1-126-935-11	ELECT	470MF	20%	16V	
		< CONNECTOR >				
CN600	⚠ 1-508-786-11	PIN, CONNECTOR (5MM PITCH) 2P				
CN601	⚠ 1-508-765-11	PIN, CONNECTOR (5MM PITCH) 3P				
CN603	⚠ *1-580-844-11	PIN, CONNECTOR (POWER)				
CN800	*1-580-798-11	CONNECTOR PIN (DY) 6P				
CN801	*1-573-296-21	CONNECTOR, BOARD TO BOARD 10P				
CN803	1-695-915-21	TAB (CONTACT)				
CN804	1-778-037-11	PIN, CONNECTOR 6P				
CN807	1-568-878-51	PIN, CONNECTOR 3P				
CN900	1-568-678-11	TERMINAL BLOCK, S 3P				
CN902	1-695-299-11	CONNECTOR, BOARD TO BOARD 50P				
CN1401	*1-568-880-51	PIN, CONNECTOR 5P				
CN1407	1-564-511-11	PLUG, CONNECTOR 8P				
CN1408	*1-568-879-11	PIN, CONNECTOR 4P				
CN1420	1-568-878-51	PIN, CONNECTOR 3P				
		< DIODE >				
D500	8-719-109-85	DIODE RD5.1ES-B2				
D502	8-719-979-85	DIODE EGP20G				
D503	8-719-979-85	DIODE EGP20G				
D504	8-719-991-33	DIODE 1SS133T-77				
D505	8-719-982-03	DIODE MTZJ-3.6A				
D506	8-719-991-33	DIODE 1SS133T-77				
D507	8-719-109-85	DIODE RD5.1ES-B2				
D600	8-719-510-53	DIODE D4SB60L				
D601	8-719-046-77	DIODE EM1-V1				
D603	8-719-109-97	DIODE RD6.8ES-B2				
D604	8-719-046-75	DIODE EU-1-V1				
D605	8-719-302-43	DIODE EL1Z				
D606	8-719-302-43	DIODE EL1Z				
D607	8-719-046-78	DIODE EG-1Z-V1				
D608	8-719-302-06	DIODE EU2A				
D609	8-719-301-64	DIODE RU4DS				
D610	8-719-046-74	DIODE AU-01Z-V1				
D611	8-719-058-38	DIODE FMN-G12S				
D612	8-719-046-76	DIODE RU-3YX-V1				
D613	8-719-058-38	DIODE FMN-G12S				
D614	8-719-058-38	DIODE FMN-G12S				
D615	8-719-046-75	DIODE EU-1-V1				
D616	8-719-110-03	DIODE RD7.5ESB2				
D617	8-719-991-33	DIODE 1SS133T-77				
D618	8-719-991-33	DIODE 1SS133T-77				
D619	8-719-991-33	DIODE 1SS133T-77				
D620	8-719-991-33	DIODE 1SS133T-77				
D622	8-719-923-60	DIODE MTZJ-T-77-9.1A				
D625	8-719-991-33	DIODE 1SS133T-77				
D626	8-719-046-74	DIODE AU-01Z-V1				
D631	8-719-109-93	DIODE RD6.2ES-B2				
D800	8-719-991-33	DIODE 1SS133T-77				
D801	8-719-991-33	DIODE 1SS133T-77				
D802	8-719-991-33	DIODE 1SS133T-77				
D803	8-719-908-03	DIODE GP08D				
D807	8-719-302-43	DIODE EL1Z				
D808	8-719-908-03	DIODE GP08D				
D809	8-719-018-82	DIODE RGP02-20EL-6394				
D810	8-719-302-43	DIODE EL1Z				
D812	8-719-038-49	DIODE FMS-3FU-LF027-103				
D815	8-719-908-03	DIODE GP08D				
D817	8-719-109-85	DIODE RD5.1ES-B2				
D901	8-719-030-11	DIODE SLA-570KT3F				
	*4-203-258-01	HOLDER,LED ;D901				
D902	8-719-923-60	DIODE MTZJ-T-77-9.1A				
D903	8-719-923-60	DIODE MTZJ-T-77-9.1A				
D904	8-719-923-60	DIODE MTZJ-T-77-9.1A				
D905	8-719-923-60	DIODE MTZJ-T-77-9.1A				
D906	8-719-923-60	DIODE MTZJ-T-77-9.1A				
D1201	8-719-109-72	DIODE RD3.9ES-B2				
		< FUSE >				
F601	⚠ 1-576-232-21	FUSE (H.B.C.) 5A/250V				
	⚠ 1-533-230-12	HOLDER, FUSE ;F601				
		< FERRITE BEAD >				
FB600	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH				
FB601	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH				
FB602	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH				
FB604	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH				
FB605	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH				
FB606	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH				
FB607	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH				
FB608	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH				
FB800	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH				
		< IC >				
IC500	8-759-192-71	IC STV9379				
IC600	8-749-010-92	IC STR-S6709				
IC601	⚠ 8-749-924-92	IC TLP721(D4-)				
IC602	8-749-920-61	IC SE-135N				
IC603	8-759-144-82	IC µPC2405HF				
IC604	8-759-510-52	IC TEA7605				
IC606	8-759-267-25	IC LM2940T-9.0				
IC800	8-759-103-93	IC µPC393C				
IC900	8-747-905-11	RAY CATCHER ELEMENT SBX1790-51				

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Replace only with the part number specified.

D

REF.NO.		PART NO.	DESCRIPTION	REMARK
IC901		8-749-012-12	IC IS474	
IC1200		8-759-250-68	IC TDA7264	
IC1201		8-759-502-21	IC TDA2822M	
			< JACK SOCKET >	
J900		1-764-606-11	JACK	
J1200		1-770-218-11	JACK, PIN	
			< COIL >	
L502		1-412-519-11	INDUCTOR 3.3UH	
L503		1-412-519-11	INDUCTOR 3.3UH	
L609		1-412-533-21	INDUCTOR 47UH	
L611		1-412-527-11	INDUCTOR 15UH	
L612		1-412-522-41	INDUCTOR 5.6UH	
L613		1-412-522-41	INDUCTOR 5.6UH	
L615		1-412-529-11	INDUCTOR 22UH	
L616		1-412-533-21	INDUCTOR 47UH	
L801		1-459-111-00	COIL, DRAM CORE (CDI)	
L802		1-459-104-00	COIL, WITH CORE	
L803		1-420-872-00	COIL, AIR-CORE	
L804		1-429-306-11	TRANSFORMER, HORIZONTAL LINEARITY	
L805		1-406-674-11	COIL, CHOKE 3.3MMH	
L806		1-412-527-11	INDUCTOR 15UH	
L809		1-412-533-21	INDUCTOR 47UH	
L811		1-406-978-11	COIL, CHOKE 150UH	
L813		1-412-552-11	INDUCTOR 2.2MMH	
L901		1-408-603-31	INDUCTOR 10UH	
L902		1-408-603-31	INDUCTOR 10UH	
L903		1-408-409-00	INDUCTOR 10UH	
L904		1-408-409-00	INDUCTOR 10UH	
			< IC LINK >	
PS600	⚠	1-532-686-91	LINK, IC 2.7A (ICP-F75)	
PS601	⚠	1-532-686-91	LINK, IC 2.7A (ICP-F75)	
PS602	⚠	1-532-686-91	LINK, IC 2.7A (ICP-F75)	
PS603	⚠	1-532-686-91	LINK, IC 2.7A (ICP-F75)	
			< TRANSISTOR >	
Q501		8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q502		8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q503		8-729-900-89	TRANSISTOR DTC144ES	
Q601		8-729-025-04	TRANSISTOR 2SC3852A	
Q602		8-729-320-28	TRANSISTOR 2SA1667	
Q603		8-729-805-05	TRANSISTOR 2SC3601-E	
Q604		8-729-024-35	TRANSISTOR 2SC2808STP-R	
Q605		8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q606		8-729-900-65	TRANSISTOR DTA144ES	
Q607		8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q800		8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q801		8-729-017-06	TRANSISTOR 2SC4793	
Q802		8-729-016-32	TRANSISTOR 2SC4927-01	
Q803		8-729-119-80	TRANSISTOR 2SC2688-LK	
Q804		8-729-900-89	TRANSISTOR DTC144ES	
Q805		8-729-900-89	TRANSISTOR DTC144ES	
Q900		8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1200		8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1201		8-729-900-74	TRANSISTOR DTC143TS	
Q1202		8-729-900-80	TRANSISTOR DTC114ES	
Q1203		8-729-900-74	TRANSISTOR DTC143TS	
Q1204		8-729-900-74	TRANSISTOR DTC143TS	

REF.NO.		PART NO.	DESCRIPTION			REMARK
			< RESISTOR >			
R500		1-215-457-00	METAL 33K	1%	1/4W	
R502		1-249-421-11	CARBON 2.2K	5%	1/4W	
R503		1-249-429-11	CARBON 10K	5%	1/4W	
R504		1-215-457-00	METAL 33K	1%	1/4W	
R505		1-249-382-11	CARBON 1.2	5%	1/4W	F
R507		1-215-888-00	METAL OXIDE 220	5%	2W	F
R508		1-216-371-00	METAL OXIDE 1.5	5%	2W	F
R509		1-249-443-11	CARBON 0.47	5%	1/4W	F
R510		1-249-443-11	CARBON 0.47	5%	1/4W	F
R520		1-215-457-00	METAL 33K	1%	1/4W	
R521		1-215-457-00	METAL 33K	1%	1/4W	
R522		1-247-863-91	CARBON 22K	5%	1/4W	
R523		1-247-863-91	CARBON 22K	5%	1/4W	
R524		1-249-425-11	CARBON 4.7K	5%	1/4W	
R525		1-249-425-11	CARBON 4.7K	5%	1/4W	
R526		1-249-421-11	CARBON 2.2K	5%	1/4W	
R600		1-216-490-11	METAL OXIDE 39K	5%	3W	F
R601		1-249-417-11	CARBON 1K	5%	1/4W	
R602		1-215-473-00	METAL 150K	1%	1/4W	
R603		1-215-898-11	METAL OXIDE 10K	5%	2W	F
R604		1-249-420-11	CARBON 1.8K	5%	1/4W	
R605		1-216-362-11	METAL OXIDE 0.27	5%	2W	F
R607		1-216-421-11	METAL OXIDE 12	5%	1W	F
R608		1-216-365-00	METAL OXIDE 0.47	5%	2W	F
R610		1-215-427-00	METAL 1.8K	1%	1/4W	
R611		1-216-354-11	METAL OXIDE 2.7	5%	1W	F
R612		1-249-428-11	CARBON 8.2K	5%	1/4W	
R613		1-249-417-11	CARBON 1K	5%	1/4W	
R614		1-215-877-11	METAL OXIDE 22K	5%	1W	F
R615		1-249-435-11	CARBON 33K	5%	1/4W	
R616		1-215-471-00	METAL 120K	1%	1/4W	
R617		1-215-901-00	METAL OXIDE 33K	5%	2W	F
R618		1-247-863-91	CARBON 22K	5%	1/4W	
R619		1-216-425-11	METAL OXIDE 56	5%	1W	F
R620		1-260-131-11	CARBON 470K	5%	1/2W	
R621		1-216-425-11	METAL OXIDE 56	5%	1W	F
R622		1-249-437-11	CARBON 47K	5%	1/4W	
R623		1-249-429-11	CARBON 10K	5%	1/4W	
R624		1-249-393-11	CARBON 10	5%	1/4W	F
R625		1-249-434-11	CARBON 27K	5%	1/4W	
R626		1-249-430-11	CARBON 12K	5%	1/4W	
R627		1-216-347-11	METAL OXIDE 0.68	5%	1W	F
R628		1-249-415-11	CARBON 680	5%	1/4W	F
R629	⚠	1-244-945-91	CARBON 1M	5%	1/2W	
R630	⚠	1-218-265-21	METAL 8.2M	5%	1W	
R631	⚠	1-205-949-11	WIREWOUND 1.8	5%	10W	
R632		1-247-807-31	CARBON 100	5%	1/4W	
R633		1-247-807-31	CARBON 100	5%	1/4W	
R634		1-249-397-11	CARBON 22	5%	1/4W	F
R635		1-249-437-11	CARBON 47K	5%	1/4W	
R636		1-249-417-11	CARBON 1K	5%	1/4W	
R637		1-247-815-91	CARBON 220	5%	1/4W	
R638		1-247-863-91	CARBON 22K	5%	1/4W	
R639		1-215-427-00	METAL 1.8K	1%	1/4W	
R642	⚠	1-205-949-11	WIREWOUND 1.8	5%	10W	
R645		1-249-422-11	CARBON 2.7K	5%	1/4W	
R646		1-249-377-11	CARBON 0.47	5%	1/4W	F
R647		1-202-933-61	FUSIBLE 0.1	10%	1/2W	F
R649		1-249-426-11	CARBON 5.6K	5%	1/4W	F

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Replace only with the part number specified.

D VM

REF.NO.	PART NO.	DESCRIPTION				REMARK
R800	1-249-421-11	CARBON	2.2K	5%	1/4W	
R802	1-249-429-11	CARBON	10K	5%	1/4W	
R803	1-249-423-11	CARBON	3.3K	5%	1/4W	
R805	1-247-863-91	CARBON	22K	5%	1/4W	
R809	1-247-890-00	CARBON	330K	5%	1/4W	
R812	1-249-421-11	CARBON	2.2K	5%	1/4W	
R813	1-215-867-00	METAL OXIDE	470	5%	1W	F
R814	1-249-411-11	CARBON	330	5%	1/4W	
R816	1-216-481-11	METAL OXIDE	1.2K	5%	3W	F
R817	1-216-481-11	METAL OXIDE	1.2K	5%	3W	F
R818	1-215-883-11	METAL OXIDE	33	5%	2W	F
R819	1-216-345-11	METAL OXIDE	0.47	5%	1W	F
R820	1-249-403-11	CARBON	68	5%	1/4W	
R821	1-215-909-11	METAL OXIDE	47	5%	3W	F
R822	1-215-868-00	METAL OXIDE	680	5%	1W	F
R824	1-249-420-11	CARBON	1.8K	5%	1/4W	
R826	1-247-752-11	CARBON	1K	5%	1/2W	
R827	1-249-425-11	CARBON	4.7K	5%	1/4W	
R828	1-247-863-91	CARBON	22K	5%	1/4W	
R829	1-249-493-11	CARBON	56K	5%	1/2W	
R830	1-217-778-11	FUSIBLE	1K	5%	1W	F
R832	1-215-877-11	METAL OXIDE	22K	5%	1W	F
R833	1-249-441-11	CARBON	100K	5%	1/4W	
R835	1-216-471-11	METAL OXIDE	27	5%	3W	F
R836	1-249-439-11	CARBON	68K	5%	1/4W	
R837	1-249-427-11	CARBON	6.8K	5%	1/4W	
R840	1-247-815-91	CARBON	220	5%	1/4W	
R841	1-249-418-11	CARBON	1.2K	5%	1/4W	
R842	1-249-441-11	CARBON	100K	5%	1/4W	
R843	1-247-891-00	CARBON	330K	5%	1/4W	
R846	1-247-893-11	CARBON	390K	5%	1/4W	
R847	1-247-897-11	CARBON	560K	5%	1/4W	
R848	1-249-863-91	CARBON	22K	5%	1/4W	
R849	1-249-429-11	CARBON	10K	5%	1/4W	
R850	1-249-425-11	CARBON	4.7K	5%	1/4W	
R851	1-215-898-11	METAL OXIDE	10K	5%	2W	F
R852	1-249-432-11	CARBON	18K	5%	1/4W	
R870	1-216-349-00	METAL OXIDE	1	5%	1W	F
R900	1-247-815-91	CARBON	220	5%	1/4W	
R901	1-247-734-11	CARBON	39	5%	1/2W	
R902	1-247-734-11	CARBON	39	5%	1/2W	
R904	1-249-389-11	CARBON	4.7	5%	1/4W	F
R905	1-247-804-11	CARBON	75	5%	1/4W	
R906	1-247-804-11	CARBON	75	5%	1/4W	
R907	1-247-804-11	CARBON	75	5%	1/4W	
R908	1-249-401-11	CARBON	47	5%	1/4W	
R909	1-249-429-11	CARBON	10K	5%	1/4W	
R910	1-249-422-11	CARBON	2.7K	5%	1/4W	
R911	1-249-426-11	CARBON	5.6K	5%	1/4W	
R912	1-249-429-11	CARBON	10K	5%	1/4W	
R913	1-247-863-91	CARBON	22K	5%	1/4W	
R914	1-249-437-11	CARBON	47K	5%	1/4W	
R919	1-249-437-11	CARBON	47K	5%	1/4W	
R921	1-249-437-11	CARBON	47K	5%	1/4W	
R922	1-247-807-31	CARBON	100	5%	1/4W	
R923	1-249-421-11	CARBON	2.2K	5%	1/4W	
R924	1-259-884-11	CARBON	4.7M	5%	1/4W	
R925	1-247-807-31	CARBON	100	5%	1/4W	
R926	1-259-884-11	CARBON	4.7K	5%	1/4W	
R1200	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1201	1-249-434-11	CARBON	27K	5%	1/4W	
R1202	1-249-389-11	CARBON	4.7	5%	1/4W	F
R1203	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1204	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1205	1-249-428-11	CARBON	8.2K	5%	1/4W	
R1206	1-249-428-11	CARBON	8.2K	5%	1/4W	
R1207	1-249-413-11	CARBON	470	5%	1/4W	
R1208	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
R1209	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
R1210	1-249-413-11	CARBON	470	5%	1/4W	
R1211	1-249-424-11	CARBON	3.9K	5%	1/4W	
R1212	1-249-424-11	CARBON	3.9K	5%	1/4W	
R1213	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1216	1-249-413-11	CARBON	470	5%	1/4W	
R1217	1-249-425-11	CARBON	4.7K	5%	1/4W	

< RELAY >

RY600	⚠	1-755-018-11	RELAY	

< SWITCH >

S601	⚠	1-571-433-21	SWITCH, PUSH (AC POWER)	
S900		1-692-979-11	SWITCH, TACTILE	
S901		1-692-979-11	SWITCH, TACTILE	
S902		1-692-979-11	SWITCH, TACTILE	

< SPARK GAP >

SG801		1-519-422-11	GAP, SPARK	

< TRANSFORMER >

LF600	⚠	1-421-776-21	LFT	
LF601	⚠	1-421-776-21	LFT	
T601	⚠	1-429-604-11	SRT	
T800		1-426-981-11	TRANSFORMER, FERRITE (PMT)	
T803	⚠	1-453-169-11	TRANSFORMER ASSY, FLYBACK (UX-1604A2)	
T804		1-437-090-31	HDT	

< THERMISTOR >

THP600	⚠	1-809-827-11	THERMISTOR, POSITIVE	

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*A-1644-070-A	VM BOARD, COMPLETE		
	**********		
*4-368-683-21	SPRING, TRANSISTOR		

< CAPACITOR >

C1701	1-126-933-11	ELECT	100MF	20%	16V
C1702	1-128-551-11	ELECT	22MF	20%	25V
C1703	1-126-933-11	ELECT	100MF	20%	16V
C1704	1-107-357-11	FILM	0.47MF	5%	100V
C1705	1-107-638-11	ELECT	33MF	20%	160V
C1706	1-104-999-11	FILM	0.1MF	5%	200V
C1707	1-137-397-11	FILM	0.047MF	5%	100V
C1708	1-137-364-11	FILM	0.001MF	5%	50V
C1709	1-137-364-11	FILM	0.001MF	5%	50V
C1710	1-102-074-00	CERAMIC	0.001MF	10%	50V
C1720	1-107-667-11	ELECT	2.2MF	20%	160V
C1721	1-137-397-11	FILM	0.047MF	5%	100V
C1722	1-126-934-11	ELECT	220MF	20%	16V

VM K1 J

REF.NO.	PART NO.	DESCRIPTION			REMARK
C1723	1-161-830-00	CERAMIC	0.0047MF		500V
C1725	1-128-551-11	ELECT	22MF	20%	25V
C1726	1-126-934-11	ELECT	220MF	20%	16V
		< CONNECTOR >			
CN1015	*1-568-880-51	PIN, CONNECTOR 5P			
CN1718	1-774-418-11	CONNECTOR, BOARD TO BOARD 8P			
		< DIODE >			
D1701	8-719-991-33	DIODE 1SS133T-77			
D1702	8-719-110-88	DIODE RD39ES-B2			
D1703	8-719-110-88	DIODE RD39ES-B2			
		< COIL >			
L1701	1-408-409-00	INDUCTOR	10UH		
L1702	1-408-403-00	INDUCTOR	3.3UH		
L1703	1-408-409-00	INDUCTOR	10UH		
L1704	1-408-418-00	INDUCTOR	56UH		
L1705	1-408-418-00	INDUCTOR	56UH		
		< TRANSISTOR >			
Q1701	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q1702	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q1703	8-729-017-05	TRANSISTOR 2SA1837			
Q1704	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q1706	8-729-017-06	TRANSISTOR 2SC4793			
Q1708	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q1709	8-729-119-78	TRANSISTOR 2SC2785-HFE			
		< RESISTOR >			
R1701	1-249-417-11	CARBON	1K	5% 1/4W	
R1702	1-249-417-11	CARBON	1K	5% 1/4W	
R1703	1-249-421-11	CARBON	2.2K	5% 1/4W	
R1704	1-249-415-11	CARBON	680	5% 1/4W	
R1705	1-247-815-91	CARBON	220	5% 1/4W	
R1706	1-247-815-91	CARBON	220	5% 1/4W	
R1708	1-249-412-11	CARBON	390	5% 1/4W	
R1712	1-260-311-11	CARBON	39	5% 1/2W	
R1713	1-249-384-11	CARBON	1.8	5% 1/4W	F
R1714	1-249-414-11	CARBON	560	5% 1/4W	F
R1715	1-249-432-11	CARBON	18K	5% 1/4W	
R1716	1-249-417-11	CARBON	1K	5% 1/4W	F
R1717	1-216-476-11	METAL OXIDE	180	5% 3W	F
R1718	1-249-432-11	CARBON	18K	5% 1/4W	
R1719	1-249-384-11	CARBON	1.8	5% 1/4W	F
R1720	1-249-400-11	CARBON	39	5% 1/4W	F
R1721	1-249-414-11	CARBON	560	5% 1/4W	
R1722	1-249-401-11	CARBON	47	5% 1/4W	
R1724	1-249-400-11	CARBON	39	5% 1/4W	
R1725	1-216-451-11	METAL OXIDE	120	5% 2W	F
R1728	1-249-413-11	CARBON	470	5% 1/4W	
R1729	1-249-413-11	CARBON	470	5% 1/4W	
R1730	1-249-422-11	CARBON	2.7K	5% 1/4W	
R1731	1-249-411-11	CARBON	330	5% 1/4W	

REF.NO.	PART NO.	DESCRIPTION			REMARK
	*A-1649-018-A	K1 BOARD, COMPLETE			
		**********			
	4-202-373-01	SPRING, IC			
		< CAPACITOR >			
C261	1-136-173-00	FILM	0.47MF	5%	50V
C262	1-136-165-00	FILM	0.1MF	5%	50V
C263	1-136-173-00	FILM	0.47MF	5%	50V
C264	1-136-173-00	FILM	0.47MF	5%	50V
C265	1-137-366-11	FILM	0.0022MF	5%	50V
C266	1-137-366-11	FILM	0.0022MF	5%	50V
C267	1-136-169-00	FILM	0.22MF	5%	50V
C268	1-136-169-00	FILM	0.22MF	5%	50V
C269	1-101-005-00	CERAMIC	0.022MF		50V
C270	1-101-005-00	CERAMIC	0.022MF		50V
C271	1-126-952-11	ELECT	1000MF	20%	35V
C272	1-126-952-11	ELECT	1000MF	20%	35V
		< CONNECTOR >			
CN1303	*1-568-879-11	PIN, CONNECTOR 4P			
CN1304	*1-568-879-11	PIN, CONNECTOR 4P			
CN1306	1-568-878-51	PIN, CONNECTOR 3P			
CN1307	*1-564-511-11	PLUG, CONNECTOR 8P			
		< DIODE >			
D260	8-719-109-72	DIODE RD3.9ES-B2			
		< IC >			
IC260	8-759-250-68	IC TDA7264			
		< TRANSISTOR >			
Q260	8-729-900-74	TRANSISTOR DTC143TS			
Q261	8-729-119-78	TRANSISTOR 2SC2785-HFE			
		< RESISTOR >			
R261	1-249-413-11	CARBON	470	5% 1/4W	
R262	1-249-421-11	CARBON	2.2K	5% 1/4W	
R263	1-249-434-11	CARBON	27K	5% 1/4W	
R264	1-249-425-11	CARBON	4.7K	5% 1/4W	
R265	1-249-424-11	CARBON	3.9K	5% 1/4W	
R266	1-249-424-11	CARBON	3.9K	5% 1/4W	
R267	1-212-849-00	FUSIBLE	4.7	5% 1/4W	F
R268	1-212-849-00	FUSIBLE	4.7	5% 1/4W	F

****

	*A-1651-088-A	J BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C290	1-101-003-00	CERAMIC	0.0047MF		50V
C291	1-101-005-00	CERAMIC	0.022MF		50V
C293	1-101-003-00	CERAMIC	0.0047MF		50V
C294	1-101-005-00	CERAMIC	0.022MF		50V
C296	1-101-003-00	CERAMIC	0.0047MF		50V
C297	1-101-005-00	CERAMIC	0.022MF		50V
		< CONNECTOR >			
CN1204	*1-564-519-11	PLUG, CONNECTOR 4P			

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

J

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN1206	*1-564-518-11	PLUG, CONNECTOR 3P	
CN1208	*1-564-519-11	PLUG, CONNECTOR 4P	
CN1210	*1-564-519-11	PLUG, CONNECTOR 4P	
CN1211	*1-564-519-11	PLUG, CONNECTOR 4P	
CN1299	*1-564-519-11	PLUG, CONNECTOR 4P	
		< SOCKET >	
J291	1-537-339-11	TERMINAL BOARD	
J292	1-537-339-11	TERMINAL BOARD	
		< RESISTOR >	
R290	1-249-426-11	CARBON 5.6K 5% 1/4W	
R291	1-249-426-11	CARBON 5.6K 5% 1/4W	
R292	1-249-426-11	CARBON 5.6K 5% 1/4W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
		MISCELLANEOUS	
		**********	
	⚠ 1-411-893-11	COIL, DEGAUSSING	
	1-452-032-00	MAGNET, DISK; 10MM Ø	
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
	1-452-724-22	COIL NA ROTATION (RT-165)	
	⚠ 1-453-169-11	TRANSFORMER ASSY, FLYBACK(UX-1604A2)	
	1-504-418-21	SPEAKER (5CM)	
	1-505-154-11	SPEAKER (6.5CM)	
	1-505-155-11	SPEAKER (10CM)	
	⚠ 1-540-006-22	CAP ASSY, HIGH-VOLTAGE	
	⚠ 1-571-433-21	SWITCH, PUSH (AC POWER)	
	1-693-338-11	TUNER/VIF (AEP) (KV-28WS2D/28WS2E/28WS2K/28WS2R)	
	1-693-340-11	TUNER/VIF (FR) (KV-28WS2B)	
	1-693-339-11	TUNER/VIF (UK) (KV-28WS2U)	
	⚠ 1-751-680-11	CORD, POWER (WITH NOISE FILTER) 2.5A/250V (KV-28WS2B/28WS2D/28WS2E)	
	⚠ 1-690-270-21	CORD, POWER (WITH CONNECTOR) 2.5A/250V (KV-28WS2K/28WS2R)	
	⚠ 1-776-204-11	CORD, POWER (FILTER) 3.0A/250V (KV-28WS2U)	
	⚠ 8-451-434-21	DEFLECTION YOKE (Y28GIA-B)	
	⚠ 8-453-005-61	NECK ASSY, PICTURE TUBE (NA297-M6)	
V901	⚠ 8-737-763-05	PICTURE TUBE (SD-284T)(W66LGY011X)	
		ACCESSORIES AND PACKING MATERIALS	
		**********	
	1-765-654-11	CABLE SPEAKER	
	4-203-538-51	MANUAL, INSTRUCTION (KV-28WS2B) (FRENCH/GERMAN/ITALIAN/DUTCH)	
	4-203-538-11	MANUAL, INSTRUCTION (KV-28WS2D) (DUTCH/GREEK/ENGLISH/GERMAN)	
	4-203-538-71	MANUAL, INSTRUCTION (KV-28WS2E) (FINNISH/DANISH/NORWEGIAN/SWEDISH)	
	4-203-538-91	MANUAL, INSTRUCTION (KV-28WS2K/28WS2R) (CZECH/ENGLISH/POLISH/BULGARIAN/RUSSIAN)	
	4-203-538-61	MANUAL, INSTRUCTION (KV-28WS2U) (ENGLISH)	
	*4-050-191-01	CUSHION (UPPER) (ASSY)	
	*4-050-192-01	CUSHION (LOWER) (ASSY)	
	*4-050-193-01	INDIVIDUAL CARTON	
	*4-395-957-01	BAG, PROTECTION	
		REMOTE COMMANDER	
		**********	
	1-473-692-11	COMMANDER, STANDARD TYPE (RM-862)	

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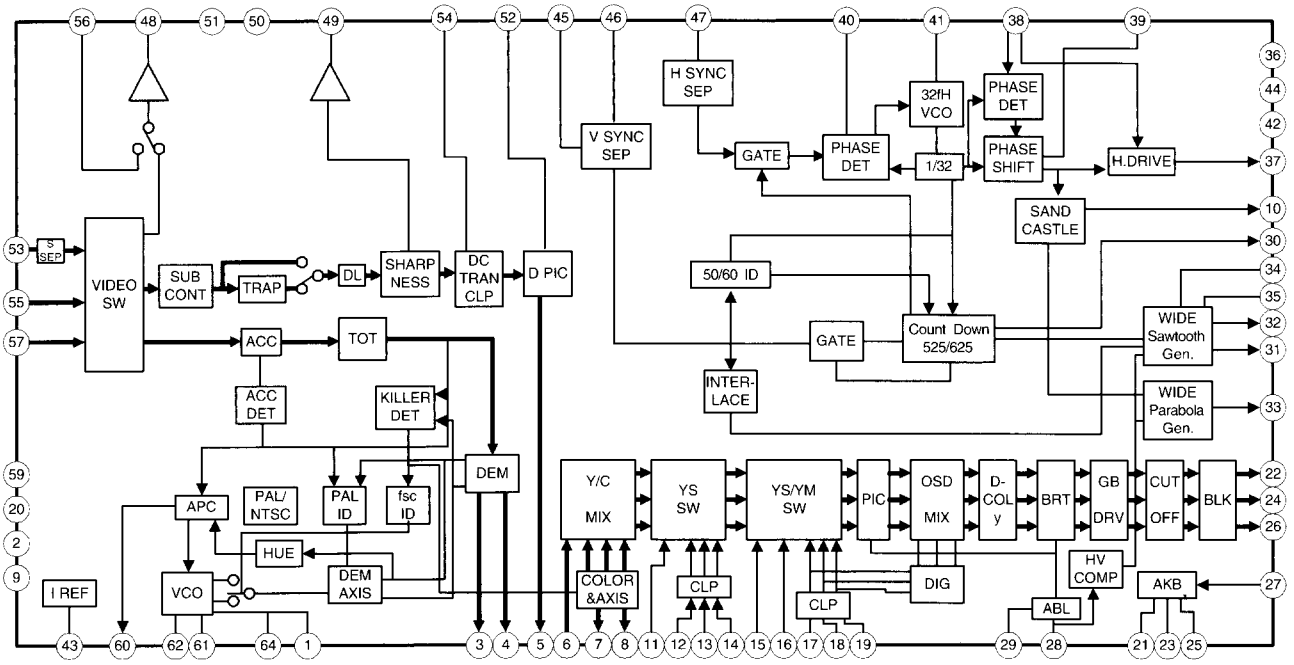

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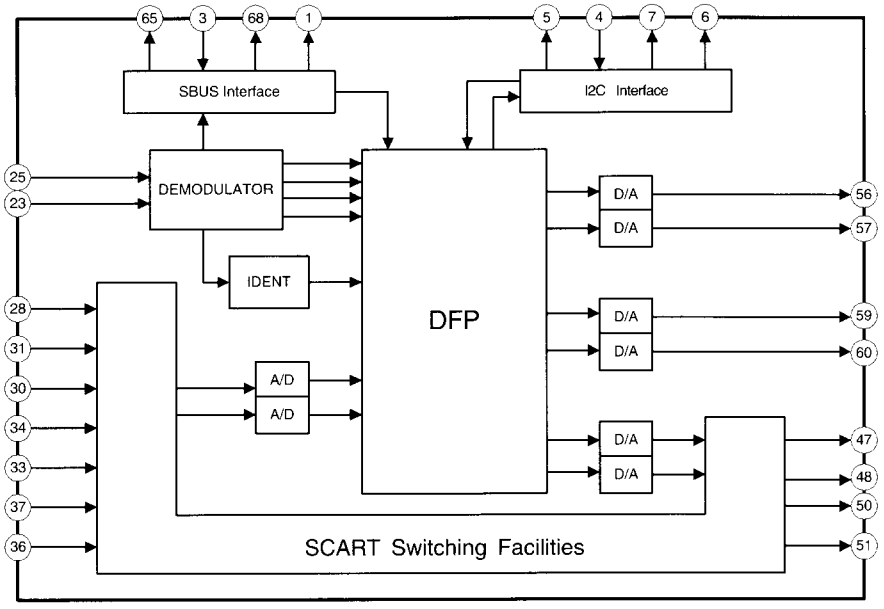

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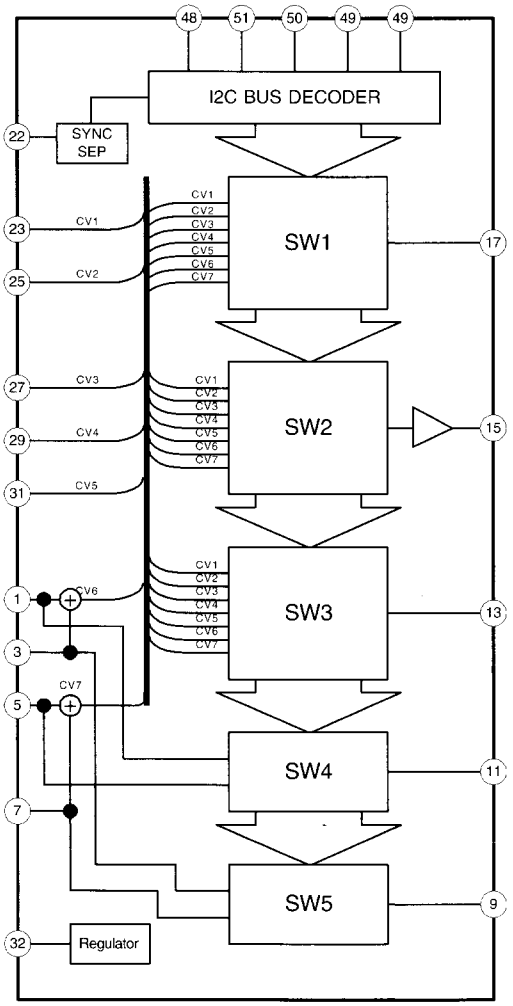
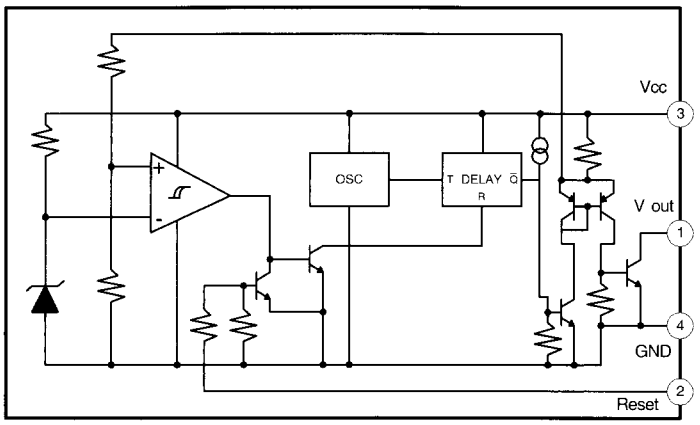
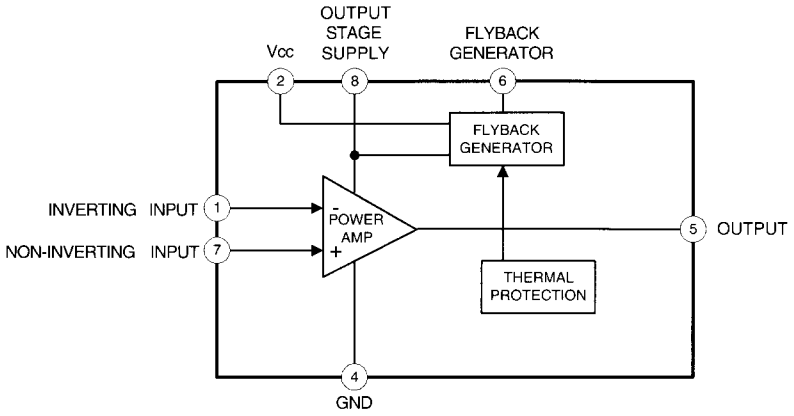


A BOARD IC4 PST593C



D BOARD IC500 STV9379



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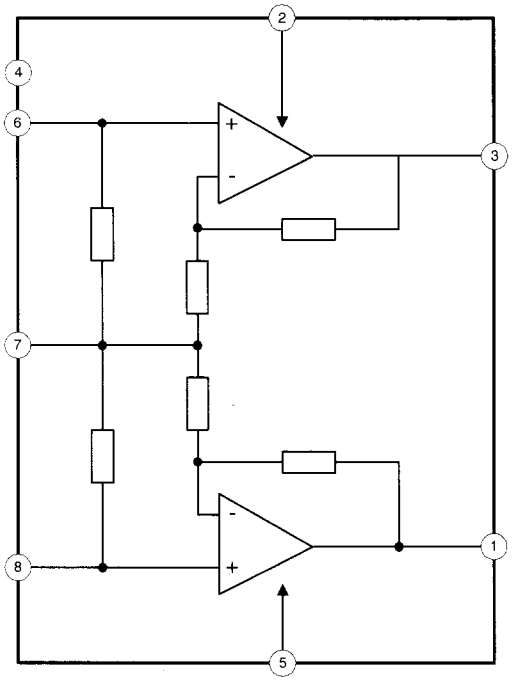

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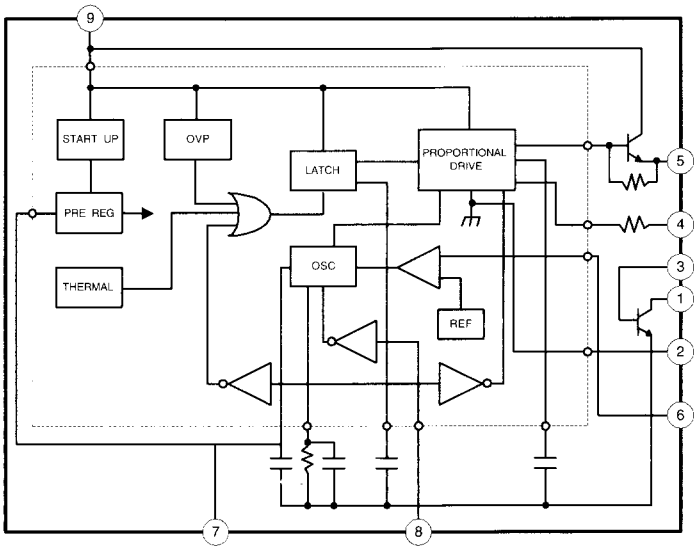

5-4. SEMICONDUCTORS

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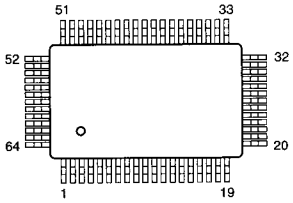

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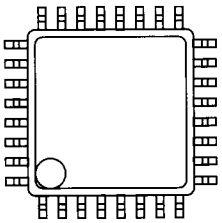

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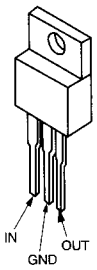

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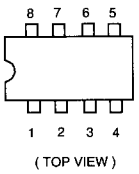

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LM2940T-9.0
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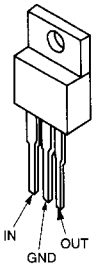

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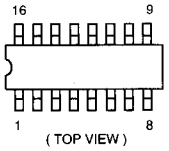

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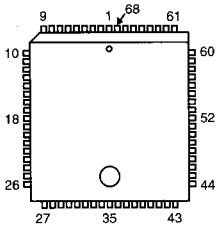
MSP3410-15



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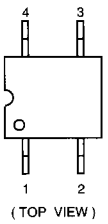

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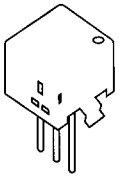

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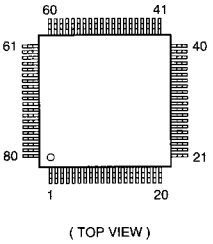

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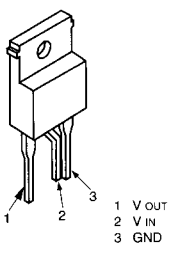

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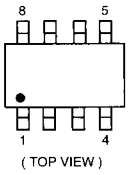
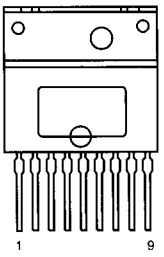


STR-S6708



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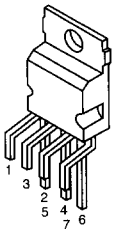

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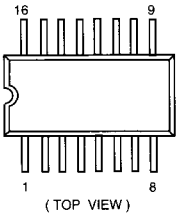

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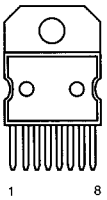

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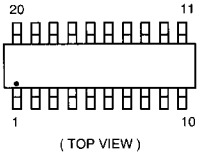

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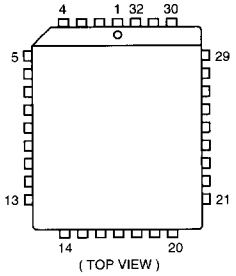

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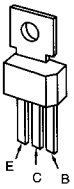

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2SA933S
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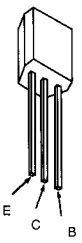

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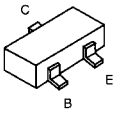

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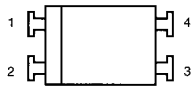

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EG-1Z-V1 RGP02
EGP20G RGP10GPKG23
EL1Z RGP15GPKG23
EM1-V1 RU3YX
EU-1-V1 RU4AM-T3
EU2-V1 RU4DS
FML-G12S

MTZJ-3.6A RD3.9ESB2
MTZJ-3.9B RD5.1ESB2
MTZJ-5.1B RD5.6ESB2
MTZJ-5.6B RD6.2ESB2
MTZJ-6.2B RD6.8ESB2
MTZJ-6.8B RD7.5ESB2
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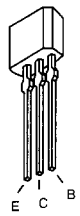

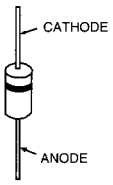

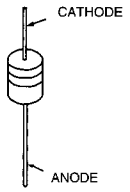

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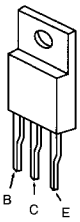

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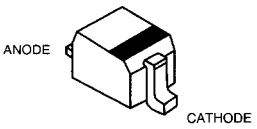

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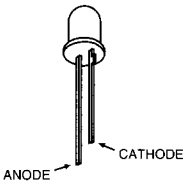

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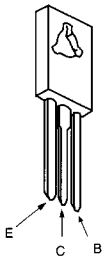

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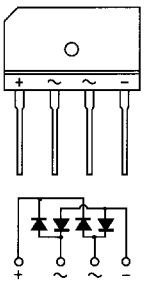

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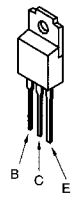
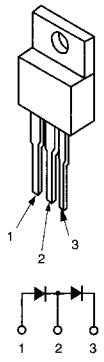
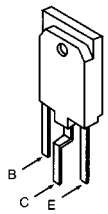


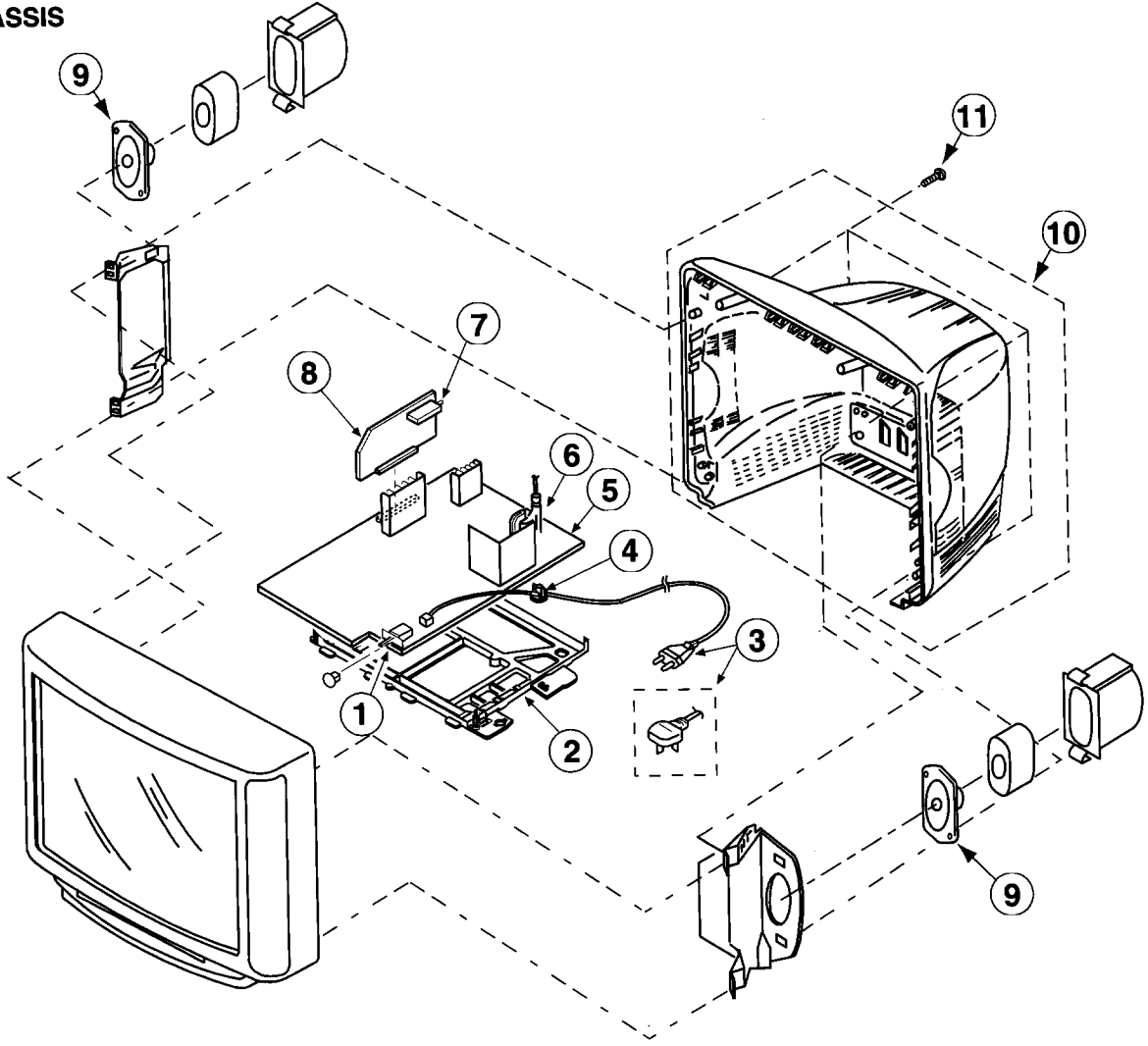
FMS-3FU



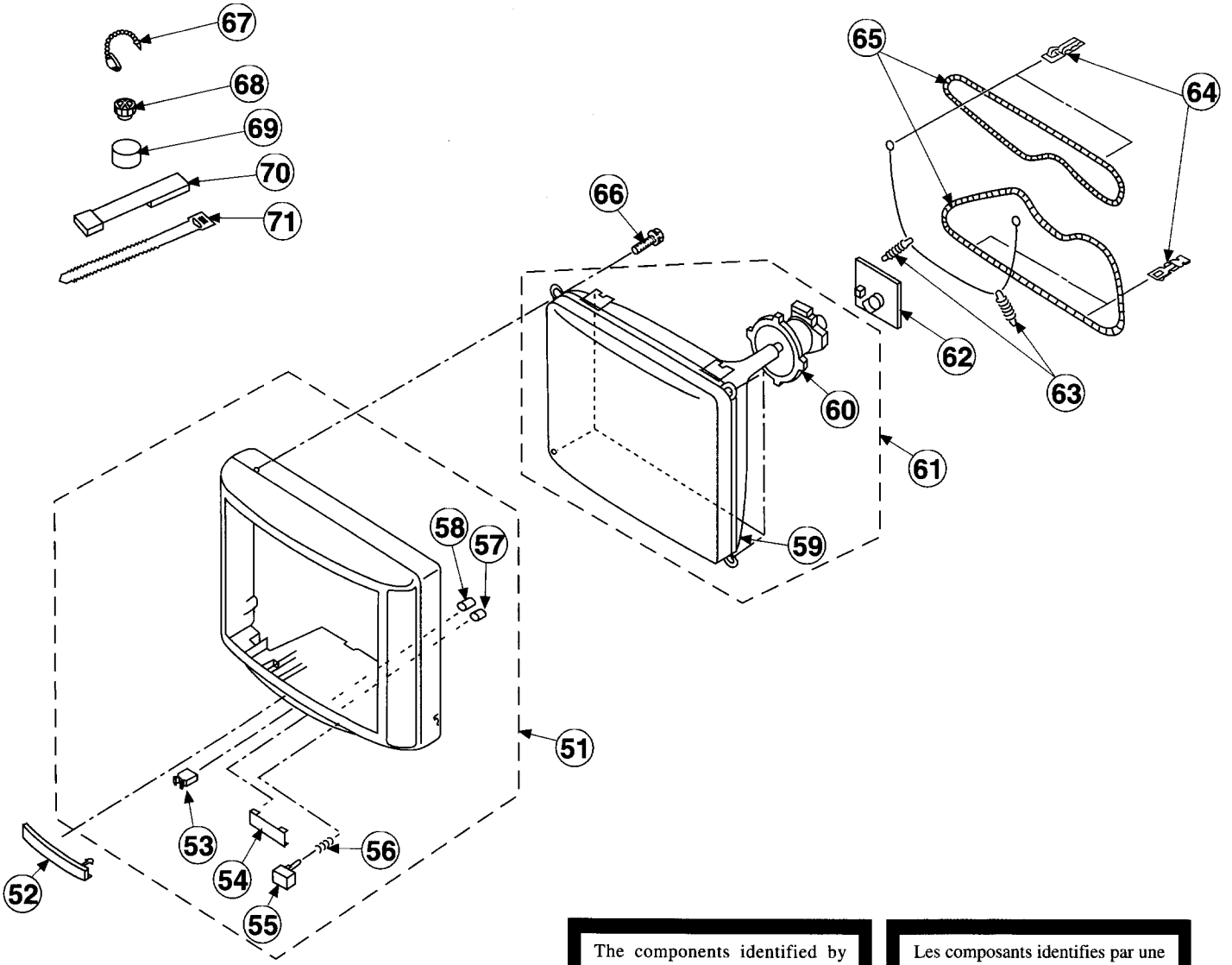
2SC4927-01



6-1. CHASSIS



6-2. PICTURE TUBE



The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

SONY
SERVICE MANUAL

BE-3D CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-25X1A	RM-839	Italian	SCC-KO5G-A	KV-25X1K	RM-839	OIRT	SCC-K08N-A
KV-25X1B	RM-839	French	SCC-K01G-A	KV-25X1L	RM-839	Irish	SCC-J21A-A
KV-25X1D	RM-839	AEP	SCC-K07G-A	KV-25X1R	RM-839	OIRT	SCC-K08P-A
KV-25X1E	RM-839	Spanish	SCC-K06G-A	KV-25X1U	RM-839	UK	SCC-K04E-A

CORRECTION

SUBJECT : CHANGE OF PART NUMBER

File this supplement with the service manual

☛ : Corrected portion

REFER PAGE 74

INCORRECT

```
A-1652-037-A  IF BOARD, COMPLETE (KV-25X1A/25X1D/
              ******************      25X1E/25X1K/
                                      25X1L/25X1R)
A-1652-038-A  IF BOARD, COMPLETE (KV-25X1U)
              ******************

A-1652-036-A  IF BOARD, COMPLETE (KV-25X1B)
              ******************
```

REFER PAGE 74

CORRECT

```
1-693-338-11  TUNER/VIF (FR) (KV-25X1A/25X1D
                                 25X1E/25X1K
                                 25X1L/25X1R
1-693-339-11  TUNER/VIF (FR) (KV-25X1U)

1-693-340-11  TUNER/VIF (FR) (KV-25X1B)
```

MICROFILM

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Consumer A & V Products Company
TV & Display Products Div.

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